

January 1997

# BOARDWATCH MAGAZINE

**Guide to Internet Access and the World Wide Web**

## **U.S. ROBOTICS LAUNCHES 56 KBPS MODEM WAR**

**Order Cuban Cigars  
via World Wide Web**

**Web Advertising -  
Getting Your Share  
of Web Ad Dollars**

**The Internet in Brazil**



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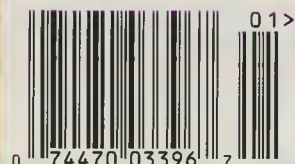
Guide to Internet Access and the World Wide Web

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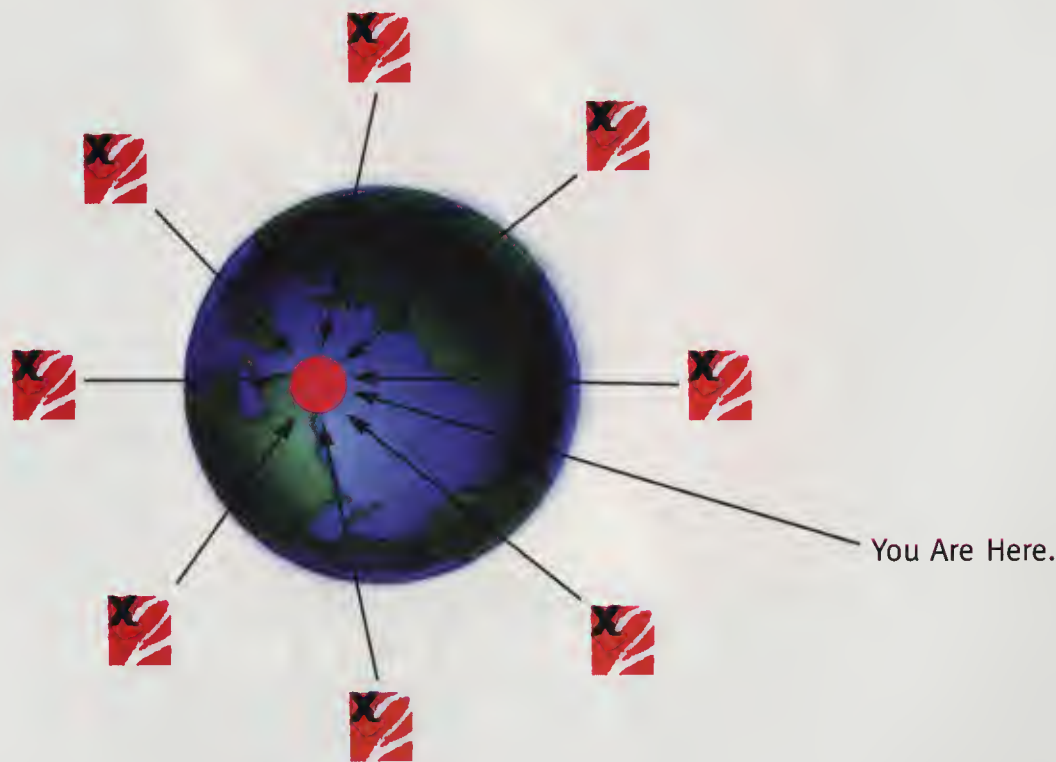


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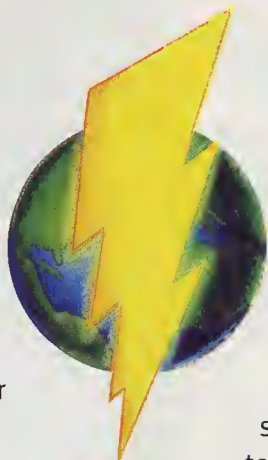
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- opportunities to capitalize on the heavily-marketed x2 brand
- listing of your service on the U.S. Robotics worldwide web site – reach millions of people who are interested in getting access to the Internet at 56 Kbps

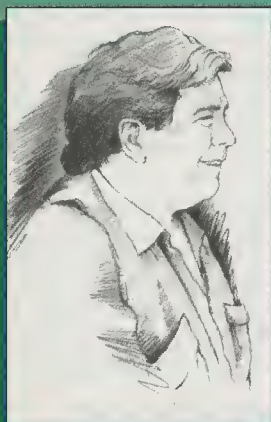
## The Top 10 Reasons to Support x2

1. **It's upgradable.** Every U.S. Robotics high-speed desktop modem being sold today is upgradable to x2.
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9. **It comes in all sizes.** U.S. Robotics offers 56 Kbps-capable products to fit ISPs and budgets of all sizes.
10. **It's integrated.** x2 is available in integrated platforms that support 56 Kbps, ISDN, V.34 and management capabilities.



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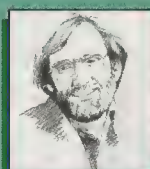


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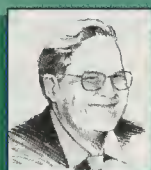
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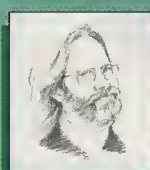
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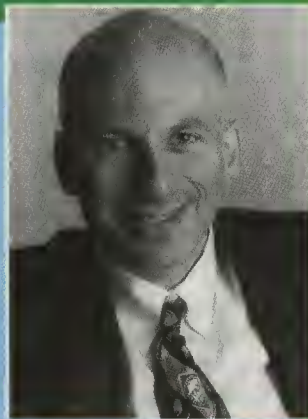


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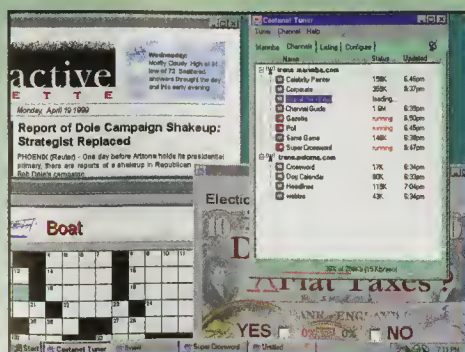
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### Contributing Writers

Alan Cox	Ric Manning
L. Detweiler	Zindar Mendoza
John C. Dvorak	Bob Rankin
Vito Echevarria	Rea Redd
Michael Erwin	Doug Shaker
Steve Graves	Frank Sowa
Bill Holbrook	Forrest Stroud
Durant Imboden	Jim Thompson
Rudyard Kipling	Wallace Wang

### Production Manager

Jack Kramer

### Graphic Design and Production

Marla Asheim  
 Kathy Meyers

### Subscriptions/Circulation

Cathy Rougier  
 Deanna Glenn

### Technical Operations

Gary Funk

### Advertising Director

Brian Noto

### Circulation Director

David Dixon

### Gentle Reminder

Tom Her

### Advertising Sales

Roger Mertes  
 Donny Yoshida  
 Bob Holley

### Editorial Offices

8500 W. Bowles Ave., Suite 210  
 Littleton, CO 80123  
 (303)933-8724 Editorial  
 (303)933-2939 Fax  
 (303)933-8881 BBS  
 (800)933-6038 Subscriptions  
<http://www.boardwatch.com>

### World Wide Web

<http://www.boardwatch.com>

### Electronic Mail

Internet:  
[jack.rickard@boardwatch.com](mailto:jack.rickard@boardwatch.com)  
[subscriptions@boardwatch.com](mailto:subscriptions@boardwatch.com)

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# EDITOR'S NOTES

by Jack Rickard

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## FAIR WINDS AND FOLLOWING SEAS

*"Missed me by THAT much" -*  
Maxwell Smart, 1963

It's probably too early to declare victory. But with our first issue of 1997, it might prove salutary to lift the skirts a bit and talk about the transition Boardwatch Magazine has undergone over the past year. This largely because so many others in companies involved with the online milieu have faced or are facing similar challenges.

Boardwatch began life in March of 1987. We've been declared dead, disabled, irrelevant, obsolete, and wrong so many times in the past ten years that I should be quite accustomed to it at this point. As a notably vain person, I never quite do, and probably take it all a bit too personally. We've risen from the ashes on a very nearly annual basis. I've learned over time that we'll probably never quite reach a position to buy out Bill Ziff, particularly now that he's retired from the business. And on the other hand, with each passing year we find that which does not kill us makes us stronger. But I have to be the top turnaround artist in the magazine business - I've done it ten times in a row now - with the same magazine every time.

The past year has been particularly pointed however. There has to be fifty new magazines now on the rack all claiming their rightful status as definitive guide to the Internet. Almost all of the larger billion-dollar publishing houses such as IDG, CMP, and of course Ziff have launched new titles aimed at the now trendy portion of the personal computer revolution - communications and

Internetworking. A few are aiming more specifically at InTRANets. I confess I don't even know what the term means. We had isolated Local Area Networks (LANs) that weren't connected to anything. Then we connected them to each other to make an Internet. Now we have Intranets, kind of like Internets, but for internal use only - not connected to anything? What next? Bellbottoms?

There has been an influx of at least ten million new humanoids onto the network - each jostling to substantiate the claim to have invented it, or at least been part of it back when. The din of press releases, new product announcements, and just plain noise has become deafening. And the migration of technology companies from yesterday's stars and darlings to today's bankruptcy has reached a terrifying pace. Currently, industry insiders are tossing the 18-24 month time frame about as the short period between the launch of 56 kbps technology and standardization. Need I remind anyone that in today's Internet Time Distortion field, that is the equivalent of 74.6 years for males and 76.2 years for females? It might as well be a lifetime.

Most of all, we've been told repeatedly and with some vehemence precisely what we were. The number of individuals who have stumbled into this business in the past 18 months quite willing to assess and define precisely what and where we were in the world (a BBS magazine, a hobbyist magazine, a nerd magazine, an OLD magazine, a little magazine, etc.) has been particularly annoying. In truth, some of this originated with ad salesmen from other publications desperate for us to be ANY kind of magazine other than whatever type of magazine they were - which really is quite flattering. But annoying nonetheless.

Since we began covering online communications in 1987, and the Internet in early 1989, I can only temper my chagrin with the certain knowledge that whatever we were, or whatever we might become, we're approximately as good as our last issue. And having published one to approbation all around, that earns us the opportunity to try again this month. And there is a lesson in there somewhere that is simply more obvious to me, doing a 30 day publishing cycle, than it is to many of the marvelous companies and people that have been players in this business. You earn your stripes anew every day. Earn them well, and you can arise on the morrow to give it another shot. But the road is littered with Cromemco's, Kaypro's, Osborne's, Godbouts, Intergalactic Digital Research's, and others who thought that success demanded continued success. It does not. It keeps you in the game for the next round, and that is all.

At Boardwatch, we start 1997 with an entirely new bevy of advertisers, new editors, new columns, and probably better opportunities before us than we've ever had. We have some new writers coming onboard with some excellent stuff. The industry is very nearly new all over again and some of the old recurring battles are new again once more. I really AM enjoying the angst and the joy and the terror of the new migration to 56 kbps modems. The phones are ringing again with readers who had left us to dance with other younger and prettier publishing maidens, but are now returning with cause and not shy about regaling us with tales of the terrors of the night and how good it is to be back with Boardwatch. I'm not sure what lured them away, a little uncomfortable that I'm unclear on what it is we do that brought them back, but they're welcome back all.



And there is more exciting things happening with the industry than I can ever recall.

It is my belief, not terribly well founded, that we have been in a windstorm of epic proportions, fueled by near hysteria, and an influx of new citizens. It's a bit like boom town in the mining fields where a tiny hamlet of 200 suddenly finds itself overrun with 15,000 new people. I do not advocate a return to the days when we were the hamlet of 200. But I am looking for the 15,000 to find housing, settle down a bit, and begin forming some kind of "business as usual" life. The past 18 months have been chaos with thousands of new, mostly irrelevant, products introduced. It has made it very difficult for us to locate and describe the products that ARE relevant, some of them quite important. It's made it difficult on our readers, many of whom face crucial architectural decisions where hooking up with the wrong vendor and the wrong product can lead them down a road to disaster, and allying with the RIGHT technology can position them for future success to a greater degree than ever before. And it's been hard on vendors, who now get to design, build and market a relevant product in horribly compressed time frames. If they forecast wrong, they can spend a fortune developing the wrong thing for the wrong time. Worse, if they prophesy correctly, and wind up in the RIGHT place at the RIGHT time with the RIGHT product, the incessant din of noise on and about this network makes it almost impossible for them to TELL anybody about that might care.

I can't say that the storm is over at this point. But I am seeing signs of rationalization across the industry. The naive level has declined dramatically. We've actually foregone much in the way of "web advertising" because we didn't want to get caught up in the backlash when the "millions of hits per day" story became too obviously a lie. We're beginning to cautiously explore what DOES work and doesn't with a few of the more savvy vendors who have made reality noises in their expectations and mission definition. We've avoided the "make millions as an Internet Service Provider" angle. It would sell

a lot of magazines, and we do think it is an unusually promising area of entrepreneurial activity. But it takes a lot of technical expertise, a tremendous amount of dedicated effort, and it is a very competitive business.

So I'm hopeful that 1997 brings exciting new technological developments and further expansion of the Internet to all corners of the globe in new and useful ways. But I've also asked Santa for a bit more rational, considered weather for the new year.

#### Predictions for the new year:

WebTV will be huge - but it's an offshoot business akin to Nintendo. And a lot of consumers are going to be frozen in place with obsolete devices unable to take advantage of all the cool new things.

The ISP business will sort itself out in some interesting ways with a lot of mergers, buyouts and acquisitions. But the increase in numbers of Internet Service Providers will actually accelerate. Outside the U.S., it will grow even faster than inside the U.S.

A new band of increasingly non-technical and uninformed consumers will want a connection in 1997. Customer Service is going to move from just gruesome to hilariously hopeless. Even the smaller ISP's are just not going to be able to put some of these people online. By the end of the year, it will be obvious that some people are just not meant to be in the room with electrically powered devices - much less on the Internet.

Cable delivery of Internet Access will continue to be discussed. It will again be moved out to the NEXT year for any useful activity. This prediction will also be appropriate for my editorial in January 1998, January 1999, and probably January 2000.

XDSL will make real gains in 1997, but the 56 kbps frenzy will demonstrate that people want higher bandwidth, but not at any price. They like free, but will pay about \$20 per month.

Continued wishful thinking/discussion of penny-per-pixel metered pricing of Internet Access in 1997. But flat rate will gain ground further, and

by the end of the year actually start to grow cancerously into other areas of communications - voice most notably.

PCS wireless voice telephone service will be a big winner in 1997. But telco expectations are just too high.

All the RBOC and large long distance telephone companies will be fully onboard offering Internet services. Small ISP's will find it affects them much less than they feared.

The number of new Internet backbones will grow ferociously in 1997. Peering issues will reach a critical juncture. It will either be worked out brilliantly, or the Internet will fracture into a ferocious war with end users unable to reach all web sites. Peering/interconnect will be discussed in Washington and in the courts.

Online sales will get very real in 1997 - really for the first time. Interest in online stores will be near hysterical by the end of the year. Internauts will get over the fear of buying and online shopping will start to play a roll in daily living.

Flat screen monitors will be very hot - but pricey.

There will be a big shakeout of Internet Magazines in 1997. But we'll see you again in 1998.

Stay with us.

Jack Rickard  
Editor Rotundus







## Letters to the Editor

Boardwatch Magazine  
8500 W Bowles Ave Suite 210  
Littleton Co 80123

# LETTERS TO THE EDITOR

Address correspondence to Letters to the Editor, *Boardwatch Magazine*, 8500 West Bowles Ave., Suite 210, Littleton, CO 80123; by fax to (303)933-2939 or by e-mail to [letters@boardwatch.com](mailto:letters@boardwatch.com)

## THE CREEK

Jack,

I wanted to drop a line, to say hi, be noticed, and make a small request. I am the Network Administrator/Engineer for Cherry Creek Internet. We run a small ISP in the Cherry Creek area. We consist of three primary entities, Me, Eric Kinne (Pres.), and Greg Kinne (CEO).

We came online in late September, and have been formulating plans for making this little venture grow ever since. I'm sure I sound like just about every other ISP around. But we're striving hard to be different. We're doing all the usual things an ISP does, offering Web Services, Dialup 28.8 (\$18/Month), and so on. But were looking at focusing on some different areas then most.

We're currently formulating Marketing plans for an online community called "The Creek". We've formulated somewhat of a roll-out plan, we have some ideas for some creative content, and we've managed to setup one of the few SSL Servers running Linux and Apache. We're planning to use Certificates to verify membership and offer businesses Secure Transaction services. (We just have to figure out how to become a CA, without all the cost or hassle. :)

Part of our plan, involves tapping the creative nature of whomever we can to create content that people can use, and will want to use. We've got several systems lined up to do Online ordering forms that will promptly send a fax to the owner. We've developed Databases behind specific pages that are easily modified \*by\* pages, so vendors can easily upgrade sites.

We've come up with online coupons, and are pushing vendors to support these. We're also working with lead people in the effort to get EDI to the Internet. (It might happen, and we have people who want to be there if it does.)

A lot of this stuff isn't necessarily new. But it's stuff that no local provider I know of is really doing full tilt yet. So we're trying. We also have a moderately interesting scheme for Tech Support. We're starting off with a meager 6 dialup lines. We're using Ascend MAX hardware, so expanding that limit shouldn't be too tough, or hopefully too expensive. But we're getting "techie" people that we know, involved with the sign-up process. We're offering Training, free Internet, and various other incentives for people willing to help provide our first level of Technical Support. So far it's working fairly good. We have two "techie" people, and about 20 users so far. Slow going, but it's tough, in a City where there's 30+ ISP's vying for accounts. A highly competitive market, to say the least.

We're not touting high end technical support. We tell people what we have, and what they can expect, and then tell them we'll do our best. So far, that's been good enough for all involved, even great in a few cases.

We're doing this for enjoyment. Profit, if/when it happens, will be very nice, but for now, all we have is enjoyment. (We want to be a part of what the Internet is evolving to, and possibly be able to contribute to it, rather than just "try to keep up".

Basically, that's it. I wanted to let you know a bit about us, what we are aiming at, where we started from. We're working hard formulating The Creek, and letting business trickle in right now. As soon as we have content, Greg has rather large plans for advertising that I'm looking forward to. Stuff not done by any ISP to date. I would also like to hear from you, or any of your staff, if they have any creative ideas that they've been pondering, but not doing anything about, because no ISP has done them, giving them cause to actually put it on paper. (As you can tell, I'm not a writer. :)

And to close. Kudos for *Boardwatch*. It's a great resource. And I \*love\* the

Hummer. I've seen you cruising before. It looks great. Do you take it off-road much? Everyone else I know baby's them to death. I personally have a '97 Wrangler I'm currently building to be a Bear off-road. Keep up the good work, and thanks in advance if any nifty ideas trickle our way.

Jay  
[Enosysop@scream.com](mailto:Enosysop@scream.com)  
<http://creek.net>

Jay:

*Good to hear from you. The Denver area has indeed become a very competitive market with some really very good Internet Service Providers in the area plying the trade. In competitive markets such as this, it is clearly evident that some form of specialization or extension of service needs to be employed to differentiate one service from another. Some ISPs are moving more toward web hosting. Some are focusing on deploying higher speed connections such as ADSL, wireless, and of course the coming battle over 56 kbps connections will be interesting. Some are focusing on creating shopping malls. Others offer seminars and training. I think it will be very interesting to see what comes out of this boiling cauldron of creativity in the rush to be somehow different and attractive. It's a bit like a herd of 3000 pre-adolescent girls all bent on becoming the prom queen.*

*But drawing down on experience gleaned in the also very competitive days of electronic bulletin boards, I repeatedly found that the winners that kept customers to those services developed a strong sense of community among their callers. This may seem passe in the current world of the Internet, but I'm not certain that it is entirely a concept without merit once again.*

*Anything you can do to develop a local community of Internauts who can easily be in touch with each other, get help in navigating the swamp to find the high ground,*



and generally form a local group of PEO-  
PLE out of the shards of USERS, will  
probably benefit thereby. You may well be  
on the right track with "The Creek."

Good luck with the service.

Jack Rickard

◆ ◆ ◆

## DIRECTORY OF ISPS

Jack,

Let me start by saying that I feel **Boardwatch Magazine** is one of, if not THE, best industry-insider publications for coverage of the Internet and it's related topics. In addition, your efforts in putting together the Directory of ISPs is very much appreciated by myself as well as everyone that I work with. You have managed to be the first organization to compile fairly accurate and useful information about the often confusing and elusive details of the Internet infrastructure (including telecommunications) and industry. I think you have put together the most informative and succinct synopsis on this topic that I have ever read ("Internet Architecture"). I find myself referring enquiring minds to this article every day. Since this is the first publication of it's kind, my co-workers and I often find ourselves referring to it as the "Internet Bible" for the uninitiated.

With that aside, I want to ask if you plan on updating or completing the HTML edition of this directory to your web site. I know this is not a question for you but most likely for your webmaster - but I figured that you could probably tell me if it is in the works. If there is anything that I (or CRL) can do to help in completing the profiles of the backbone ISPs, please let me know. Thanks for the good reading and keep up the good work.

Kendall Holback  
CRL Network Services  
kh@crl.com

*Thank you Kendall. We're trying. We started this directory during the first days of 1996 (our first issue was released in March) after quite a bit of time developing a database of Internet Service Providers. I recall distinctly the feeling in the room that if we put this much effort into something this gruesomely technical and list like, would anybody ever actually read it? As always, I sounded like a raving lunatic describing what it should look like, what it should do, and what it might accomplish. But we really didn't know.*

*I don't know that we quite qualify as industry Bible, but the response has been*

*extremely encouraging. The directory has grown at such a pace in three issues that we are struggling with some truly embarrassing errors. We actually printed a file in place of the correct Sprint backbone that isn't just wrong, it isn't anything at all. I was dabbling with their backbone pasting IP numbers over cities in preparation for a traceroute article for Boardwatch itself. Somehow the production people thought this was the "latest". But we have errors quite through it. I'm in hysterics, but I'll probably be the only one to notice many of them.*

*In any event, we have completed the HTML edition of the directory this past week. As you may know, the actual listings of Internet Service Providers are updated on the web site almost continuously and certainly daily. But we have finally got the article on Internet Architecture, as well as the profiles of 14 backbone operators up and online at <http://www.boardwatch.com>.*

*We're peddling as fast as we can - but this wind is awful and the hill is certainly steep.*

*We'll be sending out our questionnaires and surveys to CRL and the other backbone operators, and of course any new ones we can find this month. It is gruesome, detailed, and unpleasant for the many public relations people at all of these companies to help get us accurate with information. But we do appreciate it and truly feel that you will find a more educated and informed customer is a much better customer in both the long and short run and in some very tangible ways. Again, we appreciate your assistance.*

Regards,

Jack Rickard

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## ACCESSING THE INTERNET BY E-MAIL

Dear **Boardwatch**:

I started buying and reading **Boardwatch** magazine with the March 1995 issue. It was only a few months ago that I actually subscribed. At present, yours is the only commercial magazine that I'm subscribing to, computer related or not.

Right now I only have e-mail and was wondering how I could get a copy of Dr. Rankin's guide, "Accessing The Internet By E-Mail." Also, in the 3/95 issue is part four in a series of using e-mail to gain access to the Internet (pages 63-65). I'd like to have the text to parts one

to three as well unless those parts already cover information in the "Accessing" guide.

You don't need to send them to me. Just tell me if I can get those using email and how.

I enjoy reading your magazine, even though I don't understand everything in it.

I was also wondering whether you ever had a subscriber/reader survey? If yes, where can I get a copy of the results?

Thanks in advance.

Joomi Lee  
[joomi@juno.com](mailto:joomi@juno.com)

Joomi,

*I'm glad you're enjoying **Boardwatch**. I've provided instructions on how to get the document you requested below. Since the file is under 60K in size, you'll have no trouble receiving it on your Juno account.*

*"Accessing" is now available in over 25 languages! For the a list of translations send [mailto:BobRankin@MHV.net](mailto:mailto:BobRankin@MHV.net) with Subject: **send list***

*To get the latest edition, send e-mail to one of the addresses below.*

*[mail-server@rtfm.mit.edu](mailto:mail-server@rtfm.mit.edu) (for US, Canada & South America). Enter only this line in the BODY of the note: **send usenet/news.answers/internet-services/access-via-email***

*[mailbase@mailbase.ac.uk](mailto:mailbase@mailbase.ac.uk) (for Europe, Asia, etc.). Enter only this line in the BODY of the note: **send lis-iis e-access-inet.txt***

Regards,  
Bob Rankin

*You can also order **Dr. Bob's Painless Guide to the Internet** directly from author Bob Rankin - [mailto:bob.rankin@mhv.net](mailto:mailto:bob.rankin@mhv.net) for details. As for a reader survey, it's been years since we did a significant one. Our Web pages, to the best of our knowledge, cannot be retrieved via e-mail, but Dr. Bob's handy guide may show you how to do it anyway.*

David Hakala

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## STATE OF THE ISP

I just wanted to say thanks for putting together such a great mag. I was a subscriber for a year or two, but I stopped because it was getting mangled by the



post office. So, I just buy it locally...it's worth the extra expense.

Your article in Nov. 96, State of the ISP, was excellent! I don't know of anyone putting together such an interesting set of stats on ISP's, they were a real eye opener.

I wonder about the direction of the Internet, is it going to become another commercial broadcasting medium which we have no choice on what we want to see and do? I've seen USENET become SPAMNET in just a few short months, get rich quick scams, live porno sites cross posting in computer operating systems newsgroups, bulk junk e-mail, etc. How soon will be before Ed McMann and Reader's Digest start showing up on my browser, as a Java applet (of course), telling me I've won other \$1,000,000? Or Fredrick's of Hollywood catalogs showing up in my e-mail? Hmmm.... interesting? Or no?

I would really like to know what you think.

Thanks again!

Dale Atkin

Dale:

*It's probably too late to keep yourself off junk e-mail lists, but we'll respect your attempt.*

*It's apparent from your own description of USENET that we do indeed enjoy a LOT of "choice on what we want to see and do" - and I wouldn't have it any other way. Reader's Digest already hosts a web site - <http://www.looksmart.com> - and it's attracting millions of hits per month. A search on "mcmahon" (the correct spelling of Ed's name) did not turn up anything, but he may be lurking in a GIF or JPG file somewhere. I too am wondering when Frederick's of Hollywood is going to send me my interactive digital catalog.*

*It is all VERY interesting... and "interesting times" can be good or bad depending on how you take them.*

Regards,

David Hakala

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## ARE SEARCH ENGINES OBLIGED TO INDEX EVERYTHING?

Is Yahoo going down the tubes? Mere months after their IPO, Yahoo, the oldest and most popular search engine on the Internet and World Wide Web, seems to be having difficulties keeping up with the increasing stream of new listings.

Reports are circulating that new listings are not showing up on the Yahoo database searches. An internet marketing specialist, Colin d'Elia of "get the word out" (<http://www.dushlek.com>), says that none of his clients have shown up on Yahoo after repeated submissions and months of waiting. "get the word out" specializes in web marketing and promotion.

At least one web hosting provider agrees. Mike Clark of the discount web hosting firm Commercial-Directory (<http://www.commercial-directory.com>) says that many repeated attempts to get their numerous customers' sites listed with Yahoo have given no result.

So, what's up at Yahoo? Has the flow of new sites to be registered so swamped the Yahoo staffers with work, that they are unable to keep up with the core business? Has "going public" absorbed the time and effort that should be going into updating the directory? Or, is there some other explanation? How long can Yahoo continue to operate on reputation alone?

Submitted by Mary Jane Colombo  
News-Media Services  
[maryjane@news-media.com](mailto:maryjane@news-media.com)

Mary Jane:

*I sincerely hope you'll forward this reply to the people who apparently paid you to distribute their personal grievances under the guise of a "press release."*

*Yahoo! has never tried to index every site on the Web, or even every site submitted to it for consideration. It's an edited directory, not a mindless gobble and regurgitator of URLs. Its management is under no obligation to list every site submitted for consideration; nor, for that matter, are Lycos, AltaVista, Infoseek or any other search engine.*

*If your freeloading friends want guaranteed market exposure, they should contact the appropriate advertising sales departments. It is unfair to slander Yahoo! just because you didn't get what you didn't pay for.*

David Hakala

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## A MOBILE NETWORK FOR SCHOOLS?

Mr. Rickard:

Can I get some feedback on an idea I have for providing Internet access to schools? I'm referring this to you because my idea is based on some arti-

cles I read in your publication. Some background first: Starting about five years ago, I self-educated myself about computers, networking, and the Internet, and am currently a Videotape Librarian/Computer Consultant for an educational TV station in New York City.

From first-hand experience, I know what a tremendous educational resource the Internet can be and I recognize the importance of learning how to work with it at an early stage. My 10-year-old niece attends a small Catholic grade school in lower Manhattan. Recently, I found that the only computers it has are a set of five old-model Apples with primitive software used by First-graders only.

This got me thinking about what it would take to change the situation there and in other Catholic schools. Schools in affluent neighborhoods are likelier to get computers, connections, and support. What of Catholic schools in poorer neighborhoods? Even if money could be found to set up computers and connections at one of these schools, what of the others?

Here's my idea: How about a van containing a wireless, Internet-connected LAN consisting of color notebook computers? This van would go to a school, where the van's staff would take out the 30-40 wireless-network-card-equipped notebooks and place them in a designated room. Both a laser printer and a color inkjet printer, each with its own wireless network card, would also be brought to that room, along with a wireless router. The computers, printers, and router would be plugged into available outlets; if necessary, power strips would be brought in to accommodate these items.

The connections would be relayed to the van, to a router connected to a server and a high-speed wireless Internet modem (Wi-Lan's or the equivalent). The van would need a wired connection to electrical power or it could have a generator of sorts. The computers would have a suite of software including Internet software. They would be configured to access the Internet through the high-speed modem.

The van's staff would include a Network Technician to install, watch over, and troubleshoot the network and an Instructor to either conduct the class with the students or coordinate with a teacher to provide regular lessons. Of course, another Network Technician in the van will keep an eye on things there. If everything goes well, at the end of the day or pre-scheduled time, the equipment would be returned to the van, which would then go on to its next stop.



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Yes, I recognize that there's a high initial investment (I guesstimate about \$250,000) to set even one of these mobile networks up and it will require even more to pay the staff, maintain the equipment, cover Internet access, and keep the hardware and software up to date. The hope is that since one set of equipment can serve several schools, it will be easier to get funding for this setup rather than for something that will only help one school. Also, it's probably more cost-effective to keep one setup up-to-date rather than having separate setups grow old ungracefully or attract thieves. If necessary, this mobile network service can be adapted for business use to help subsidize the school-related service.

That's it. I'm sure that there are any number of issues which I haven't addressed. For example, can all this wireless transmission actually work properly in a skyscraper-studded, interference-laden area like New York City? How long will the computers hold up under so much use by so many people? Is once- or twice-a-week availability enough to meet the needs of the students? What would be viable commercial uses for a mobile network?

I'm putting this up for discussion mainly because in my current situation (no money, poor business skills), I am not likely to put something like this together. If someone else is doing so, it would be interesting to see how it's working out. If this gives someone the idea to start up a mobile network service for schools, well, more power to him or her. In either case, if you're providing such a service to New York City, I would love to participate. Especially if it will help my niece's school.

Thanks for listening (so to speak).

Nelson Cruz  
mail119683@alterdial.uu.net

Nelson:

*Your vision is technically feasible even in the iron bowels of New York City, where cellular phones and modems are known to work from time to time. Any portable computer that can't stand up to a class of third graders should be recalled to the factory in disgrace. Oddly, I've recently seen a traveling computer show bus on the road here in Denver, but traffic was such that I didn't catch their phone number.*

*If once or twice a week is enough Physical Education for our kids, I think they'd get by with an hour or two per week on the Internet.*

*Perhaps some of our corporate readers will see this letter and help you realize your Internet Road Show. Best of luck!*

David Hakala

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## E-MAIL MARKETING ISSUE

Jack,

As an avid reader of **Boardwatch**, I was excited to see that you were going to spend an entire issue on email marketing. My company, TSW, Inc., has been a major player in this arena, especially in building tools for the general consumer to combat abuses, and in building tools for legitimate companies looking to make use of their email client lists for marketing, sales, and communication.

TSW's eFilter software — currently available at <http://www.catalog.com/tsw/efilter> — allows PPP and SLIP users to delete junk email right off their servers, before they even download it. The software currently works for Windows machines, but we have been considering bringing it to the Mac and Unix should enough interest exist.

Our other program, called EXPRESS M@IL, allows companies to maintain an email client database and use this database for business ends. We believe that email marketing is a trend that will continue and we believe that our software allows companies with lists of eager recipients to market effectively.

The problem in the current industry is the proliferation of non-targeted email lists of individuals who are uninterested in the message, and find it a violation of their internet rights. In the future, we believe online marketers will see that success in this industry is dependent on respect.

If there is any way TSW can help you with your upcoming article(s) on this subject matter, please give me a call at: (610)566-2252.

Ethan S. Borg, President  
TSW, Inc.  
tswinc@cynet.net

Mr. Borg:

*The Junk E-Mail issue is quite gone to print at this point but I will try to publish your letter so that our readers can locate your filter software.*

*I don't know that junk e-mail precisely violates anyone's "Internet Rights" and in*

*fact I'm unclear on just what "Internet Rights" might encompass. But the stuff can be annoying as hell.*

*At the same time, e-mail can be a very effective means of communicating with your customers. So despite devoting virtually our entire December issue to the topic, I don't think we've reached a lot by way of conclusions other than that one Internaut's Junk E-mail is another Internaut's treasure.*

*A shrill remnant of the "don't commercialize MY Internet" geek fringe don't really want to hear that, but their solutions seem to orbit to a greater or lesser degree about the concept of killing off all e-mail but that originating at their keyboard - as I understand it. I'm increasingly finding them as annoying as the problem.*

*I've long advocated a technical/software solution but to date most filtering software is egregiously crude, difficult to use, and largely ineffective. If you are working on something to empower me, as an end user, to deal with this problem - bravo. But at first glance, it appears you are developing armaments for BOTH sides of the e-mail arms race. Since there is probably more money in selling software to the would be e-mail moguls bent on amassing vast troves of riches selling multilevel marketing by e-mail, I guess I'm a touch skeptical in which way this wind blows.*

*I do fear ultimately for the utility of the network. Voice telephone sales calls became so pervasive that the entire populace armed with automated answering machines to screen out the trash. This has actually been pretty effective at cutting down telemarketing. But it's also made it very difficult to reach any actual humanoids by telephone. I am continually haunted by the spectre that one evening, in the wee hours of the morning, one of these answering machines will wake up and become self aware - placing a single outbound call - ultimately setting off a storm of voice mail and answering machines dialing each other madly while we sleep. On awakening, we will find our entire communications structure crashed and burned - with our only option to leave a message at the beep.*

*Junk e-mail holds the potential of driving the same thing on the Internet. Have your e-mail filter send a message to my e-mail filter and we'll do lunch...*

Regards,

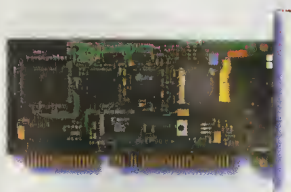
Jack Rickard

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## DOMAIN NAME SQUATTERS

Jack:

We are a small company specializing in designing, producing, and hosting client catalogs. If there are any publications related to the internet that we don't subscribe to and sometimes read, I am not aware of their existence.

Clearly, **Boardwatch** is several orders of magnitude better than whatever is in 2nd place. Keep'em coming!

After spending several hours with the WhoIs data base trying to come up with a couple of domain names for clients, I entered my name, assuming this was probably the only name left in the com domain that hadn't been registered. To my surprise, someone listed as Haugland E-Mail Service had registered "haugland.com". Pointing my browser at "haugland.com", I went straight to [www.mailbank.com](http://www.mailbank.com).

This company is based in Vancouver, and has registered thousands of domain names which they want to lease for **\$99.95** per year plus a set-up fee of **\$49.95**. They also lease mail addresses for **\$4.95** per year.

Every MailBank "owned" domain name we checked is listed in WhoIs as being an e-mail service. Their mailing addresses as well as administrative and technical contacts are all the same. None are actually housing a site. Many of the names they offer for lease have high potential for copyright problems. I have to believe that McDonalds would frown on someone using "goldenarches.com"

I also doubt that they have paid the registration fees on all of their name "inventory". I suspect that they register names and don't pay anything unless they find a customer who wants to "lease" the name. It takes 3-4 months for Network Solutions to send out their final pay up or lose the name message. By simply re-registering names as the payment period expires, these guys could go forever without ever having to pay a cent in registration fees out of their own pocket.

This situation seems to me to be a scam and to be way out of step with InterNIC policies. Are MailBank's strategy and methods legitimate? If not, can anything be done to curb these types of abuses?

Best regards,

Henry W. Haugland  
Quest Systems Group Inc.  
[henry@questgroup.com](mailto:henry@questgroup.com)

Henry:

*MailBank is actually playing by the rules – which, perhaps, should be changed to prevent this sort of "land grab" in domain space. It seems that only federally registered trademarks (of any national government) enjoy any protection under the InterNIC's current policies.*

*The practice of "hogging" domain names is not limited to entrepreneurs after a quick buck. Proctor & Gamble, Kraft Foods and other major corporations routinely register hundreds of generic words for which they have no immediate use, e. g., [diarrhea.com](http://diarrhea.com), [pimples.com](http://pimples.com) and [underarms.com](http://underarms.com).*

*We might discourage such piggish opportunism by charging steeply increasing fees for each domain name registered to a given organization – \$50/year for the first, \$100 for the second, \$500 for the third, etc. But then someone, presumably at the InterNIC would have to trace the ownership of every "new" organization, and even the IRS has difficulty keeping up with the corporation shell game.*

*Another possibility is to require a domain name to actually be used by a server of some kind on a more or less continuous basis, or the name goes back into the available pool. But again we run into the policepower shortage; someone would have to PING every domain name on a regular basis, and follow up on domains that don't answer to see if they're permanently down or just offline for maintenance.*

*Personally, I think we should all use IP addresses. That would end name disputes and we wouldn't need broken-down DNS at all. Try <http://204.144.169.6> instead of <http://www.boardwatch.com> and see how much faster you get connected. Lately, I've seen a small but growing number of sites which advertise their IP addresses instead of mnemonic domain names; perhaps a trend is starting.*

David Hakala

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Mr. Rickard,

I have enjoyed you magazine for 2 1/2 years now. Although I would like to see more on dial-up bulletin boards and have watched the comments on the disappearances, I still enjoy it immensely.

I have been consulting for businesses and home computer users on getting connected to the Internet and using it. When I meet with a personal computer owner to demonstrate the Internet, the

most common question is "What is the difference between America Online and an Internet service provider?" Now, I know and understand this difference but I feel I am not explaining it clearly enough to person. If you could help me out with an easy to follow explanation I could give this people I would appreciate it. I am not trying to say one is better then the other (although I have my opinions) just simply trying to better their understanding with the difference.

Thanks Jack. Keep up the great work!

Nathaniel McMullin  
Cyberia Systems Consulting  
[mcmullin@hotmail.com](mailto:mcmullin@hotmail.com)

Nathaniel:

*There's not much difference price-wise since AOL announced its all-you-can-eat \$19.95/month plan. AOL's nationwide POPs will be advantageous for travelers, but AOL does not cover rural areas with local-call POPs very well. Busy signals on AOL are a major problem evenings and weekends. People seeking others with similar interests for live chat will find it easier to do so on AOL than in news-groups and IRC channels. But AOL's "net-cops" are more prissy and bullying than a typical laissez-faire ISP. The Web page you request via AOL may not be the current one from the site of origin, since AOL (like many commercial online services and very large ISPs) caches Web pages and dishes up copies from its own servers the next time someone requests the same pages. That's a net benefit for the end user, since it takes less time to deliver a cached page than to get the original from its home site. Caching is more of a problem for Web site managers, whose hit counts and ad revenues may suffer.*

*AOL would hasten to add that its "proprietary content" is extremely valuable and its parental control features are good for family values.*

*Probably the best reason to subscribe to AOL is that once you do, they'll stop mailing you those pesky demo disks!*

David Hakala

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## SPAM "CURE" WORSE THAN DISEASE

Hello Jack,

When reading the November mag I saw you were going to some articles on e-mail. Just thought I would send you the way I feel is the best way to deal with spam e-mail. The idea is not mine I read



it in a news group article and felt it had lots of merit. When every one gets such a message they should reply, don't change the header or add anything such as "take me off this list," etc.. If enough people do this to the person or company that are spamming they will have several head aches. Their server is going to be overloaded and useless for real work and they will have to go through thousands of false reply to get to the real ones. after a while they will learn.

Mark  
markc@mnsinc.com

Mark,

Spammers are learning that it's more profitable in the long run to invest in targeted mailing lists than to incur the wrath of 500 people just to land one customer. Our December issue spotlights the state of the art in spam, both canned and binary. The "solution" you read in that news-group will injure innocent victims. The ISPs who provide e-mail accounts to spammers - generally without knowing that the accounts will be used to spam - will take the server hits, and their other innocent customers will be denied service for which they've paid. Please don't promulgate this plan.

David Hakala

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### BOARDWATCH, WHAT BOARD???

While this may sound a little sarcastic, it is not meant to be. Why do you keep the name **Boardwatch Magazine**? The last two issues had little, if anything in them about BBS's and from all indications, BBS's as we knew and loved them just a couple of years ago are about dead. Why not Net-watch or something like that??

Don't get me wrong, I like your magazine and find several useful or interesting things in every issue. Keep up the good work and I hope you can survive in the incredibly competitive world of publishing.

Lance  
lmertz@ktn.net

Lance,

Changing the name of **Boardwatch** has been a topic of anguished debate around the office for over a year now. We once had the entire staff in an all-day brainstorming session to come up with new names, but the ultimate decision was to keep what's worked for us these past nine years. There's a lot of brand recognition built up in "**Boardwatch**."

On the other hand, much of that recognition is mistaken identity. We still have people who think we're about bulletin boards, New Jersians who think we're about Atlantic City's gambling district and the occasional Oregonian who thinks we're experts on the lumber business. Last week, someone called asking about birdwatching opportunities in Colorado - honest!

The misspellings of our simple moniker are often amusing. Recently, we got an inquiry from "Barbara" in Elkhorn, Wisconsin. She wanted to be a freelance proofreader for "Boardwalk" magazine; I decided to muddle along without her services. There's no need to describe how the adult entertainment industry mangles our masthead.

Will we ever change the name? Nobody knows at this point.

David Hakala

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### HELP OBTAINING IP ADDRESSES

Hello:

I am writing to your magazine in relation to a topic that maybe I missed or has not been brought out clearly in your articles.

I am an experienced user, currently trying to obtain my own TCP/IP addresses so I can connect my own server to the Net. I have been following your magazine since the beginning of the year and I have found many answers to my questions, but one that still is in the air is, "How do I get an IP address?" I only need a few, maybe 10 of them to be on the safe side. I have been writing in the past 2 weeks to other groups, and the only answer I get is to see the IANA page, I did and I registered with them, now, what is the next step. I have seen information regarding the equipment, the programs and how to prepare the pages, but nothing in the registration. What I am missing.

Also, your magazine is great and I can wait for your paper magazine and the home page to be in sinc. I now wait every month for it and I do not put it down until I digest every single page.

Thanks  
Ramon Ferreris  
nomar1@ix.netcom.com

Ramon,

There are two ways to get a permanent IP address, neither of which directly involves IANA. If you need just a few addresses,

any local Internet Service Provider should be willing to rent you some of his. You'll effectively be the ISP's "tenant," paying some fee for use of a few of his IP addresses. If you're shopping for an ISP, consult our quarterly directory of ISPs to look up all who offer service in your area code: see <http://www.boardwatch.com/isp/index.htm> or order a print copy via 800-933-6038 (\$9.95 + \$4 s&h).

The second way is to register your own Internet domain name with the InterNIC Registration Services authority at <http://rs.internic.net>; see the "Registration Services" and "IP number allocation" pages there. The InterNIC issues IP numbers in minimum blocks of 255; it asks that customers who need smaller blocks of IP numbers seek them from an ISP.

Once you have your IP numbers, you can assign them to the various machines you wish to employ.

David Hakala

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### FRAUD OR FAIRNESS?

Mr. Rickard:

As one of the ISP's who took exception to the questions asked by your ISP survey, I feel compelled to refute your claims that non-disclosure of technical details for publication in your directory is fraud.

In the November issue, you compared those of us who did not want to publish our specs to a car salesman who will not tell you the specs of the engine in a car. This is humorous because on the previous page, you ridicule those who think the ISP industry will go the same way as the automotive industry. I think your comparison is equally invalid for reasons which should be obvious (for one, we are discussing a service, not a product).

I notice you do not publish the ratio of advertising to content on the front page of your magazine. It's easy to find out, and I'm sure you would tell anyone who asked (and it's probably among the best in the industry). But still, you do not publish it up in the corner next to the price, despite the fact that the content ratio affects the true value of the magazine. Are you guilty of fraud?

If you must compare the Internet to the automotive industry, why not look at the NADA books as an example? The kind of under-the-hood details you are talking about are not listed there. If a customer is educated in those kind of details, and he wishes to ask his dealer, he would. Most dealers would be glad to explain





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everything the customer wants to know. I think the same should be true for the Internet directory. You want to provide unqualified specs to an audience which largely fails to understand what those specs mean. I guarantee you that if the average internet customer hears that one ISP has a T3 line and another has a T1, they are instinctively going to lean toward the T3 ISP, even if the specs show the more educated that the T3 is badly overloaded.

In addition, I believe the method by which you collected the line information makes it easy for ISP's in multiple POP's to mislead customers, and for some ISP's to distort the truth about their connectivity.

However, I do not wish to comment further on that issue until I see the way the information is presented in this new directory.

Basically, I think that those of us who wish to limit the information circulated in the directory are not trying to deceive the customers. Instead, we simply prefer to have a potential customer call us and ask us about our service. We get one line in your directory to convey the essential information to our market. By bogging the listing down with a lot of information that can not be effectively presented in that space, you are causing the very distortion of facts that you are trying to avoid.

On the positive side, I must say that this one little item is the only thing I've ever discovered in Boardwatch that I have found fault with. Your magazine is truly exceptional.

Sincerely,

Dana Canfield  
dcanfiel@as-112-2.ashton.  
indiana.edu

Dana:

*If you felt compelled to refute these claims, then you should have done so. I can't tell that you have.*

*First, these are not technical details. As an ISP, you are selling connectivity - bandwidth - as a product. In refusing to disclose YOUR connection bandwidth to the Internet, and the number of ports sharing that connectivity, you are not refusing to disclose "technical details." You're refusing to tell just what it is you are proposing to sell. This used to be called "buying a pig in a poke." I find it utterly astounding that you would actually take the position that you can sell*

*bandwidth without providing any information on how much bandwidth it is.*

*You notice that we do not publish the ratio of advertising content on the front cover of our magazine? And this is analogous? First, certainly we would be happy to share that information with anyone who inquired. We inquired of you, and you indicated your connection information was "proprietary" and declined to do so. So there is no analog here at all. But I don't even understand the question. Any moron can count how many ad pages and how many editorial pages are in the magazine. So yes, we DO publish it - and rather publicly. That's what we are - a publication. And as you yourself point out, as magazines go our ad/editorial ratio is an absurdity. Anyone in the publishing business will tell you that it is impossible to operate a serial publication profitably on less than a 50% ad/editorial ratio. We have been in publication NINE YEARS and have NEVER for a single issue even approached a 50% ratio.*

*As it so happens, we routinely not only get requests for information on how many ad pages, but also how many readers, how many paid subscribers, how many newsstand copies, etc. etc. ad nauseum. As a matter of fact, we PAY some \$3000 annually to have an outside agency audit our claims in all these areas so that not only will our customers know these figures, but know with some certitude that they are accurate.*

*I don't have a clue what relevance a NADA book has to any of this. We list Internet Service Providers and in so doing provide them, entirely at no charge, a very wide and effective free advertisement for their service - targeted at precisely the type of new blood they most need. We get to select what we include in that information and it is not actually open to question. By far the majority of Internet Service Providers were not only extremely cooperative in providing the information, but most were genuinely curious to learn the results as well - to answer such questions as "How many customers can I support per modem?" and "How many modems can I put on a single T-1?" We can't really answer definitively how many you CAN do. But we can certainly at this point answer how many you can do and still remain within some margin of the national average for all ISPs - in other words the NORM.*

*This type of information gathering and dissemination is actually not terribly unusual in most industries. And any of the*

*ISPs with a glancing relationship with businesses prior to starting their Internet Service are by and large delighted that someone took on the task. But a few of the Internet Service Providers who may be terribly adroit technically, are hopelessly unsophisticated when it comes to any type of real-world business experience.*

*As a result, I do view any reluctance to provide anyone with details of your connection to the Internet, and with some precision what the ratio of IN to OUT bandwidth is, as essentially FRAUD. If you don't like the automobile analogy, let's try corn. I want to buy some corn. I understand you want \$20 for the corn. How much corn do I get?*

*I understand you would prefer to have a customer call you. The customer, on the other hand, is a little loathe to call 3068 Internet Service Providers to hear their sales pitch just to get some basic information on where they operate, how much they charge, and how they're connected. It's a lot easier to simply check the listings, which is rather why we've compiled them, why we've published them, why the distributors distribute them, why the newsstands carry them, and why the customers purchase the directory.*

*All of this certainly has its limits. The listings can only be a snapshot in time and all data and values are necessarily summary and present a rather simplistic approach to quantization. But that is rather why it has become so enormously popular after just two issues on the newsstand. Customers don't want to take a graduate course in IP terminology just to get a connection and click about on the web. But they do want a good connection at a good price. And your position that they shouldn't know, that we shouldn't publish, and that anyway they can call you to hear why you think it's the wrong question to ask, doesn't give anyone a warm fuzzy feeling that they will get a good connection from you.*

*By far the most intriguing thing to come out of this survey was that it rather put to rest the concept of small ISPs "overselling" the Internet or "oversubscribing" their connectivity. Indeed, it would appear that those reporting have nearly a 100% overcapacity. I have no doubt that 200 modems on a T-1 would operate very nearly optimally, and the national average would appear to be 107. While this seems anomalous in one sense, on the other hand it makes perfect sense. ISPs are building for the 93% growth in customer base they are encountering annually. It takes time to install connections, hardware, and software. If you're*



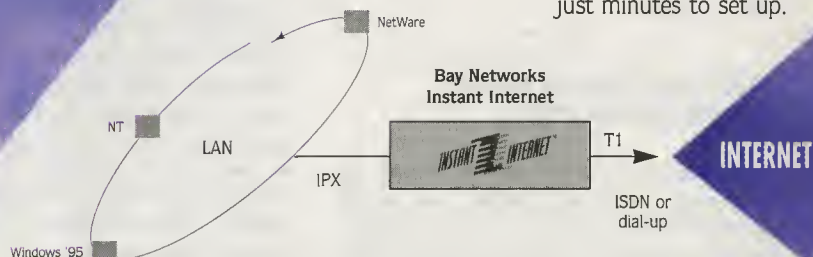
"As ambitious as the name sounds, Instant Internet lives up to its billing. This is a hassle-free, all-in-one solution that's an excellent choice for smaller NetWare sites."  
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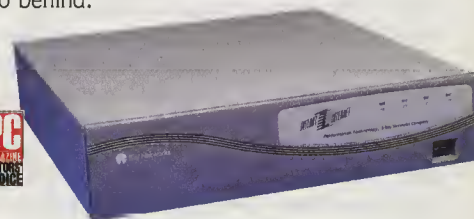
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not leading the curve a bit in capacity, you can't really add that quantity of customers at any one time. But it would appear to be that if each of the nearly 7 million dialup customers served by these ISPs went out and got a friend to sign up and get on the net today, they would all get served right now from the existing infrastructure without any problems. More to the point, the performance difficulties encountered on the Internet now do not in any way seem to be caused by Internet Service Providers oversubscribing their service.

Bottom line is that you guys are doing a great job, and ought to be crowing about it, not scurrying around trying to hide the facts or pull a fast one.

Jack Rickard

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## STATE OF THE INTERNET SERVICE PROVIDER

I just read your November editorial. I'm suspicious of your \$19.95 per month analysis. While I agree with most of your numbers I don't see where you include the cost of the local loop for the dial-in lines.

Here in Louisiana I pay \$1593 per month for a channelized T1 with 24 active channels. This adds \$67 per month per port. So following your logic,  $\$21.45 + \$67 = \$88.45$  per month per port. With 8.47 customers per port is \$10.44 in connectivity costs per customer or \$125 per year per customer. Plus the \$130 for hardware and software we are now up to \$255 per year per customer. A \$240 gross income per customer is a money losing venture. That's why we charge \$30 per month.

I can't even count how many times I have heard a potential customer say "you're ripping innocent people off". Bellsouth and AT&T are offering \$19.95 per month access here and from my viewpoint it is an artificially low price and a predatory overture. Most of the \$19.95 per month ISPs around here are Mom and Pop operations working out of their homes and are buying phone lines at residential rates rather than the true business rates. This practice will soon stop as Bellsouth has filed a tariff which will require any customer with more than 3 phone lines to buy services at business rates. They are either going to raise rates or bleed to death.

Next time you are looking for ideas why don't you do a survey of what ISPs pay for local loop charges. I bet it's a real eye opener.

Jeff Becklehimer  
beck@slidell.com

Mr. Becklehimer:

Well not precisely, but you bring up an excellent point. We did not address the fees paid to local telephone companies for lines.

My point, to some degree, is that Internet Service Providers often have surreal views of business in general. It's hardly presented as a business plan worksheet. If we view basic connectivity as the commodity offered, then it would appear they are buying it for about \$2.53 and selling it for about \$19.95 per month. That is a pretty hefty markup. Most of the retail world works on a 30% margin over cost of product. EVERYONE has office expenses, marketing expenses, payroll, utilities, taxes, insurance and often many things that ISP's DON'T have to contend with - required number of parking spaces comes to mind. And many businesses operate on much lower margins, 3-5% in some cases. Tell your story to the modem manufacturers if you want a faceful of margin tears.

But your point that the cost of local telephone access should be included in the costs of connectivity is probably quite on target. The problem is that it still leaves \$19.95 as nearly a 100% markup on the basic product. And software and hardware probably should NOT be part of the cost of product. Hardware and software expenditures are largely based on expectations of future business and expansion.

My point was, and is, that the "margins" in this business are actually quite good even given a \$19.95 monthly price. I am fully aware that all ISPs from the very largest to the very smallest pretty much view it that it would be a much better world at \$80 per month. But the price pretty clearly IS about \$20 and the assertion that it is economically infeasible at that price, with over 3000 companies offering it at that price and what looks like every telco and communications company trying to get in on it as well, is nigh on to ridiculous. It clearly is not infeasible because it is being done, and indeed it is being done widely and with great enthusiasm. We're still seeing ISPs starting with nothing and growing to several thousand subscribers with not only their expenses, but their growth funded entirely out of subscriber fees - at \$20. As noted in the article, one ISP has 2800 customers at \$10 per month.

The 24 channel T-1 connection to the Central Office is about to become a huge

issue and a gruesome one given the utterly hysterical pricing by local telephone companies for this service. It is \$700 per month in some areas, and \$2400 per month in other areas, and doesn't appear to be related to the cost of analog lines, cost of providing the connection, or anything else other than arbitrary wishful thinking on the part of the RBOCs involved. This is precisely why competition in the local loop is necessary. We don't KNOW what the true costs are when all the pricing is based on an Alice-In-Wonderland concept of economics driven by lobbying for legislators to guarantee telcos a lucrative business.

But we are about to hit a big bump in the road I think. US Robotics will probably be first with their x2 technology, with Ascend/Rockwell very close behind with a variant on the same thing. It will allow ISPs who are connected with such 24-channel T-1 connections to offer 56 kbps connections to their users. The users will be faced with a modem upgrade charge of less than \$99 to jump from 28.8 kbps to 56 kbps plus whatever you charge (I'm guessing here - \$20 per month?). The result will be that those ISPs with dozens of individual analog lines won't be able to offer 56 kbps and I think this will be the big differentiator in Internet Service this winter and spring.

Your survey suggestion is not entirely out of the question. It might be very interesting indeed. We'll look at it.

Jack Rickard

◆ ◆ ◆



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# TECHNOLOGY FRONT

by Jim Thompson  
Western News Service

## MARIMBA'S CASTANET

### *Ending the World Wide Wait, or Beginning the World Wide Waste?*

It was not long ago that four members of the original Java development team decided that more was needed, so they started their own company. This group, consisting of Arthur Van Hoff, Jonathan Payne, Sami

Shao and Kim Polese wanted to spend their time and money developing "next-generation" Java applications. Their concept was to transform Web sites into something more akin to a CD-ROM experience — a world of its own that was not limited by network slow-downs, limited bandwidth, and low-rez graphics. A good idea, but one whose time had not yet come.

After looking at the limitations, the team was soon moving in a new direction. What they found was that Java, at least in their opinion, did not have the power needed to build the type of applications they had in mind. Their solution was to begin building on Java to create a new set of tools and an environment that would allow more flexibility and power. The result was **Bongo**, a design tool for creating graphical user interfaces, and **Castanet**, a client-sever framework for distributing and running applications.

### CASTANET - SEMI-PERMANENT JAVA

Castanet is at the heart of the Marimba product line and capitalizes on the Java platform. Its main feature, and the reason it has captured so much attention, is that it eases the need to constantly download the same applications every time you visit a site.

Typically, you visit a Web site and download a Java application. It might be several weeks before you visit this site again, and when you do, you have to download that same application again. All of this takes time and system resources.

The concept behind Castanet is that the full application is downloaded only once. Once received, it is automatically installed. From this point forward, the user receives only new updates to the program which could include new code, new features or just new parameters. How often updates are downloaded (every five minutes or once a week) is dependent on the application. A headline news application might be updated every few minutes. A service offering software update information might only send information every few days or weeks.

Even if you do not access a site, the updates are retrieved automatically by Castanet's **Tuner**. These updates are normally driven by a per-channel schedule set by the channel's developer and vary depending on the need. One can also manually direct the Tuner to get all updates. Once the updates are received, you can disconnect and run the application off-line.

Castanet consists of a tuner, a transmitter, a proxy server and a repeater.

### CASTANET TUNER

For the user, the Tuner, or client software, is all that is needed to get started. Once connected to the Internet, the Tuner connects to a transmitter in the same way that a traditional browser connects to any Web site. "Castanet channels are complementary with standard HTML browsers and most Java applets can be easily integrated into Castanet channels. Browsers can be launched from channels and channels can be launched from within a browser."



### *Castanet's Tuner Manages Sources & Frequency of Applet Updates*

On your first visit to the Transmitter site, you receive a specific application, which is called a channel from

Jim Thompson is  
Managing Editor of  
Western News  
Service in Los  
Angeles, California.  
CompuServe:  
72777,2677, MCI Mail:  
321-4127, mailto:  
jim.thompson  
@wnsnews.com



the server. The latest version of the application is downloaded to your Tuner and stored on your local hard drive. In the future, whenever you access that channel (Web site), instead of downloading the application again, the tuner launches and runs the associated application locally. Any update or new information is downloaded in the background to ensure that you have the latest version.

This is a good method of running programs like games, which are accessed many times. What you have is what Marimba likes to refer to as your own "Web world on your desktop."

According to a press release from Marimba, "Users interact with channels just like any application or applet. Channels can be launched from icons on the desktop by double-clicking or chosen from a standard menu. They can also be launched from a Web page by clicking on a link to a channel or from the Tuner which maintains a list of subscribed channels."

## CASTANET TRANSMITTER

The site providing the Channels must be running the **Transmitter** server product. According to information on Marimba Inc.'s Web site, "Transmitters serve channels to tuners; tuners 'pull' channel files from transmitters. Transmitters can operate as stand-alone processes or as extensions to popular HTTP servers.

"Transmitters can be customized on a per-channel basis with plug-ins. A plug-in is a Java or C++ class that is called by a transmitter to perform channel-specific processing. A plug-in can analyze channel feedback data and/or dynamically alter the files the transmitter sends to a tuner.

"A channel can accumulate and store feedback data whether or not the client is attached to a network. When the client tuner requests a channel update, it sends the channel's feedback data to the transmitter in the update request. When the transmitter receives channel feedback data, it passes it to the corresponding plug-in. Each tuner instance has a unique identifier that accompanies the feedback data. A plug-in can use the identifier to log feedback data by user, though the user may remain anonymous if he or she chooses. For example, a channel might track the features a user engages, sending counts that the plug-in logs for the channel developers. Similarly, a channel can record and feed back advertising impressions or 'click-throughs.'"

A transmitter which allows a provider to send out 100 updates per hour sells for **\$995**. The unlimited version sells for **\$15,000**.

## REPEATERS & PROXY SERVERS

As the number of users grows, repeaters are needed to pass on the information. This piece of the Castanet puzzle allows service providers to mirror channels at different locations and then connect users to the channel that has the fewest users.

The proxy server operates behind a firewall. Users behind the firewall requesting a Channel which has already been requested by another user receives the locally cached channel.

"Situated in a firewall, a transmitter proxy sends tuner requests to transmitters so channel plug-ins can process

feedback data and customize returned channel files caches copies of files obtained from transmitters to minimize cross-firewall file transfers optimizes connection utilization by sending multiple update requests on the same connection," notes Marimba.

Castanet runs on "any platform that supports the Java Virtual Machine," including Windows 95, Windows NT, OS/2, Solaris, HP UX, and AIX. According to Marimba, Inc., "a Macintosh version will be available as soon as there is a stable Java Virtual Machine for the Macintosh."

By utilizing the processing power of the personal computer some stunning applications incorporating such things as animation and audio can be delivered to the end user.

At the time of this writing, Castanet provided support only for Java code. According to Marimba, Inc, this is because Java "provides built-in security, making it the optimal solution for software deployment over public networks.

"Although Castanet can be used to deploy any type of computer code, Java is the ideal platform for creating channels because it is currently the most secure solution for deploying software across public networks," said Arthur van Hoff, Marimba's chief technology officer. "And, Java scales up or down for use in any device, it speeds and simplifies development, and it breaks the lock between operating systems and applications."

Reportedly, an "enterprise version" of Castanet will be available for "deploying non-Java executable code such as DLLs, ActiveX, Shockwave, PowerBuilder applications, etc. over secure private networks." The next version will supposedly include encryption that will allow no-Java executable code to be sent over public networks.

## BONGO: CASTANET APPLICATION DEVELOPER

Bongo is a visual tool for creating the GUI for Castanet applications. With it, you can create "presentations" that will be "distributed via a Channel." This is a visual creation tool, which means that, assuming you have some programming experience, it is relatively easy to use. Scripts are provided "for all operations or use the user interface — developed in Bongo — in your existing Java application. The first option, doing everything with scripting, is a nice solution for simple applications. For more complex applications it is better to create your user interface using Bongo and do the operations with a regular Java application," notes the Bongo user help system.

According to Marimba, "A Bongo application is called a presentation. Once you have created a presentation it is saved in a **.gui** file. If you use scripting you are done now: you have a fully operational application. In the other case you now have to write a small main Java application which loads the previously created presentation and shows it on the screen using a PlayerPanel. Your application will then receive normal AWT events from the presentation and it can access the widgets in the presentation by name. That way you can add behaviors to your application without depending on scripting alone."

Bongo is basically a nice Java tool set. It is not limited to use in Castanet applications and is not needed in order to create applications to be distributed by Castanet.



## CONCLUSIONS

Marimba has received a lot of press along with a lot of hype since it was first announced in October, 1996. Although I was only able to look at a beta version of the products (which means there were some bugs), I found the various pieces of the Marimba suite to be well behaved, easy-to-install and simple-to-use. The one major drawback that I found was the lack of support for the Windows 3.x environment, although this is very likely to change in the very near future. According to Marimba's technical support staff, the Tuner does "require Java" which means that as Java is ported to other environments, such as Windows 3.x, it will be supported.

The Marimba suite does work and does deliver on its promises. However, I believe this and similar programs need to be viewed in a broader context. The prime question then becomes, "Is it needed?"

In my view, this is just one more "gimmick" that clutters up my desktop and eats up space on my hard drive. Most of the applications I looked at were, in my opinion, not very useful or interesting. They were not something that I wanted to see again, but I was stuck with having to spend the time to download them and then spend even more time to figure out how to get rid of them.

Watching somebody's head spin around or seeing things jump all over the screen may be some computer geek's idea of a "cool" program, but it certainly is not mine. I am not saying that the Marimba technology isn't capable of much more. It is a robust program suite with lots of capabilities. However, at the time I looked at the available applications, they all seemed to fall into the "gee, isn't this neat" category.

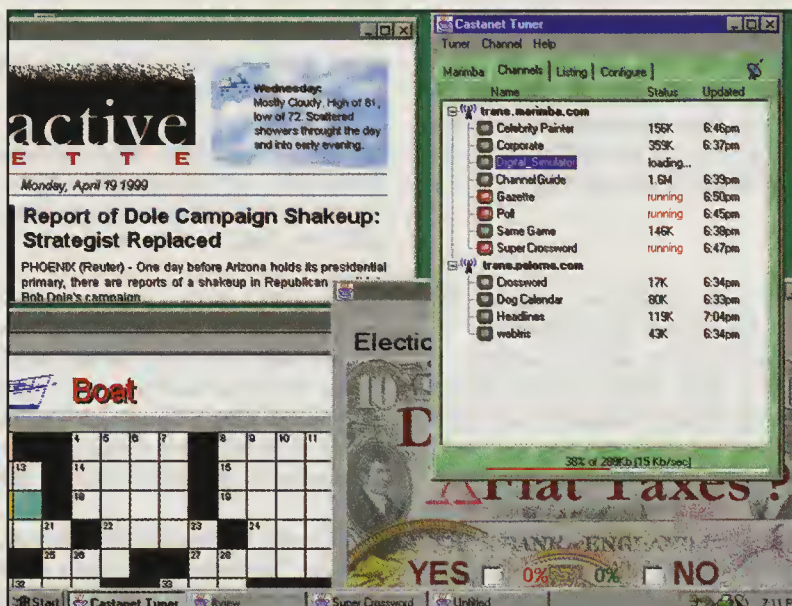
I also see this technology being ultimately used simply as a way of flooding our desktops with junk mail and unwanted advertisements. I can see corporate America licking their chops at the idea of having their unwelcome ads and hype being sent directly to people's computers — whether they want them or not!

*Corporate Guy #1: Hey, this technology has some real promise.*

*Corporate Guy #2: Yea, but it is kind of expensive. It will cost us more than \$1,600 just for the software. If you add to that the cost in man hours to get it all working and the cost of advertising the new features, we have something that will take us over budget for the year.*

*Corporate Guy #1: Who cares about the money. We are talking about taking over the minds and the computers of America and the world! No longer will we have to entice people to our Web site with interesting information, facts and news. All we have to do is get them there once. From that point on everything is automatic. Heck, we could layoff half of our Web updating staff. We're talking propaganda here! We can take freedom of choice out of the whole Internet process! This is better than unsolicited junk e-mail! Big Brother is alive and well and living in the Internet! Man, we're gonna make millions!*

Call me old fashioned, but I don't want to be force-fed with material that someone else thinks is "cool" or needed for my "education." I may be part of a dying breed, but I want to choose what I receive, when I receive it, and what is stored in my computer. ♦



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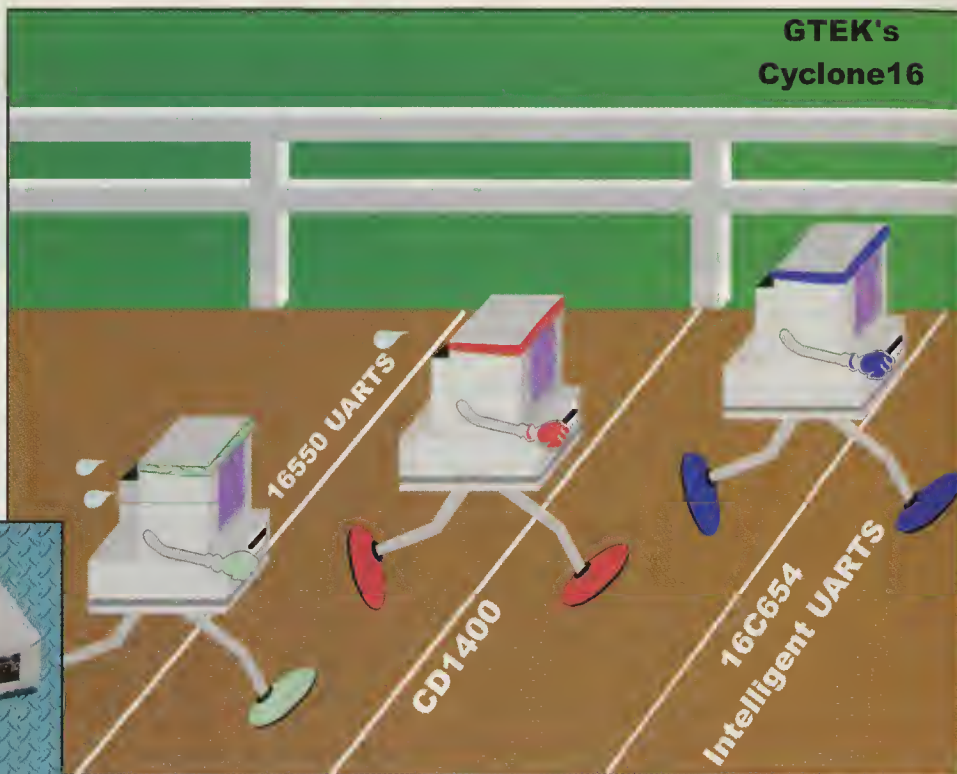


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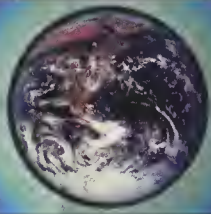
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## NETSCAPE NAVIGATOR DIAL-UP KIT FOR INTERNET SERVICE PROVIDERS

Internet Service Providers and corporate Internet managers will find it easier to get new users up and running with the Navigator™ Dial-Up Kit from Netscape Communications. The company's browser is the centerpiece of course, including LiveAudio, LiveVideo, Live3D, QuickTime and CoolTalk plugins. But the CD-ROM kit also includes dial-up networking configuration software for Windows 3.1 (Shiva Corp.'s PPP, Winsock, TCP/IP Dialer), an account setup wizard for Windows 95 (including Dial-Up Networking components in case the user didn't install them), Apple Macintosh (MacTCP 2.06 and FreePPP). The Installer allows an ISP to change the startup graphics and text; enable/disable billboards; set default installation directory; rename program groups and folders; and replace the readme file. The Account Setup Wizard supports online account creation (Netscape's Internet Account Server is required) or offline account configuration. It also supports Visa, Mastercard, American Express or Discover. The browser can be customized to replace Netscape's logo with your own, set a default home URL and even change the URL of the help support page. You can also preconfigure SMTP and POP3 e-mail servers and other mail settings, proxy server settings, helper apps and plugins. The customization software lets you change the service name associated with the Windows dialing icon, provided Windows 3.1 or Mac OS login scripts, configure phone numbers, domain servers and userid/password combinations. Starting at \$20 each in lots of 1,000 or more, the kit's price declines as more units are sold. Netscape Communications Inc., Corporate Sales: (415)937-2555 voice; (415) 528-4140 fax; <mailto:moresales@netscape.com> or [http://home.netscape.com/comprod/products/navigation/version\\_3.0/dialup\\_datasheet.html](http://home.netscape.com/comprod/products/navigation/version_3.0/dialup_datasheet.html)

## BAY NETWORKS HOSTS "VIRTUAL PRIVATE NETWORK" WORKSHOPS

Virtual Private Networks (VPNs) give business customers on-demand, secure communication links over the public Internet. Buying VPN services from a regional or national Internet Service Provider is much cheaper than building

one's own private network. Selling VPN services is a lot more profitable than peddling PPP to consumer customers.

Bay Networks is hosting a free traveling workshop designed to help "mid-tier" ISPs understand the VPN marketplace, its technology issues and – of course – how Bay Networks' IPVirtualCircuit™ technology can help you cash in on the VPN boom. The schedule is

Jan. 16	Boston, MA
Jan. 28	New York City
Jan. 30	Washington, DC
Feb. 11	Philadelphia, PA
Feb. 13	Pittsburg, PA
Feb. 18	Miami, FL
Feb. 20	Orlando, FL
Feb. 25	Atlanta, GA
Feb. 27	Chicago, IL
Mar. 4	St. Louis, MO
Mar. 6	Dallas, TX
Mar. 11	Irvine, CA
Mar. 13	San Jose, CA
Mar. 18	Seattle, WA
Mar. 20	Denver, CO

Call (508)916-4830 to register. Bay Networks: 5 Federal St., Billerica MA 01821. <http://www.baynetworks.com>

## BUILD YOUR OWN REMOTE ACCESS SERVERS

OEMs, system integrators and the adventurous hacker can now build their own Remote Access Servers using RASsoft™ software from Ariel Corp. RASsoft servers can support up to 240 sessions per shelf and over 1000 sessions in a single rack. The Unixware software supports 33.6 Kbps analog modem and ISDN subscribers, and includes call control, PPP, RADIUS authentication billing, SNMP agent and administration features. Using RASsoft, Ariel T1 modem cards and standard T1 line cards, one can build scaleable systems of up to 240 sessions in a single 19-inch chassis. RASsoft starts at \$6,000. Ariel Corp.: 2540 Route 130, Carnbury NJ 08512. (609)860-2900 voice, (609)860-1155 fax; <http://www.ariel.com>

## IPSWITCH PROVIDES WEB-BASED E-MAIL ACCESS

Checking your e-mail while away from home base is as easy as entering a URL in a browser with Web Messaging, a new feature built into the IMail Server from Ipswitch. Anyone's browser can be your

e-mail client, without disrupting the borrowed browser's configuration. Just enter your mailbox's URL and provide your mail user name and password. Then you can read, write, reply to and forward mail. Because Web Messaging is based on HTML, graphics can be embedded in messages and hypertext links are live. An enhanced ISP version of IMail with Web Messaging can add banner ads to subscribers' e-mail boxes, giving ISPs another source of revenue. Web Messaging for IMail Server for Windows NT is available immediately directly from Ipswitch, Inc., for a U.S. list price of \$195 for the standard version and \$395 for the online ad version. IMail Server for Windows NT lists for \$495 with a standard unlimited-client-access license. A mail-to-pager/mail-to-fax option is available for an additional \$65, and a DNS server option is \$195. IMail Server for Windows NT runs on Intel X86, DEC Alpha, and PowerPC platforms. Ipswitch: (617)676-5700 voice, <mailto:info@ipswitch.com> or <http://www.ipswitch.com>

## NORTEL DIGITAL IDENTITY CERTIFICATE ADD-ON

Authentication of remote parties' identities and of the server they are contacting is a key concern in electronic commerce applications. "Digital certificates" – unique strings of bits which are registered with a Certification Authority such as VeriSign (<http://www.verisign.com>) are becoming widely accepted, but they cost a good deal of money. With the Entrust/Web CA product from Nortel, you can be your own Certification Authority, issuing digital certificates to customers, trading partners and other members of any group that trusts you to be their "notary public." Based on industry standards such as X.509 and LDAP, Entrust/Web CA is compatible with Netscape Navigator and Microsoft Internet Explorer, and runs on Netscape Enterprise, Commerce, Fastrack, Microsoft Internet Information Server, IBM Internet Secure, Open Market Secure Web and other web servers. Nortel (Northern Telecom): (974)684-8589 voice or <http://www.nortel.com/entrust>

## ASCEND ANNOUNCES 6 Mbps DIGITAL SUBSCRIBER LINE TECHNOLOGY

On December 9, Ascend Communications (NASDAQ: ASND) announced its entry into the Digital Subscriber Line (DSL) market with its MultiDSL family of products. Most significantly, Ascend introduced IDSL, (a combination of ISDN and DSL), developed in concert with one of the company's key customers, MFS Communications and its subsidiary





## Galacticomm Products

	LIST	OURS
Worldgroup v2.x (2-user)	\$199	\$149
Worldgroup v2.x Dial-up Server (8-user)	\$449	\$315
Worldgroup Internet Server (20-user)	\$1995	\$1117
User Six-Pack	\$295	\$207
User Twelve-Pack	\$595	\$350
Advanced Internet Option	\$495	\$347
Entertainment Add-on Option	\$295	\$207
Fax/Online Add-on Option	\$249	\$174
Worldgroup Developer's Kit	\$495	\$347
Boca 16 Port Serial Card with cables	\$395	\$348

### Intelligent Serial Cards

Rocket Port 8 Port ISA*	\$499	\$399
Rocket Port 16 Port ISA*	\$1049	\$749
Rocket Port 16 Port ISA	\$1549	\$999
Rocket Port 32 Port ISA*	\$1999	\$1299

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Sell subscriptions to your Worldgroup system!

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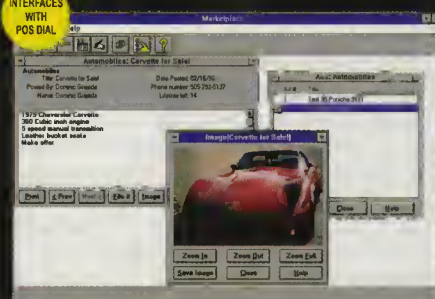
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Sell classified advertising to your users!

INTERFACES  
WITH  
POS DIAL



Includes ANSI and ASCII versions!

Marketplace is a user friendly, menu driven classified advertising database. Marketplace allows you to charge by the word or by the ad. Collect payments by credit card or by deducting credits and/or days. Marketplace can process credit card purchases instantly when used with our POS Dial Module! Client/Server credit card transactions are encrypted! Callers can be notified when logging in that new ads were posted in categories they specify.

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The Point Of Sale (POS) Dial module interfaces with VisaMan, Omni-Mall, and Marketplace to perform automated online credit card processing. Never worry about manually processing credit card sales again! Additionally, we can refer you to a merchant account provider so you can accept credit cards. Call us for a referral! FDR & MDI Certified.

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UUNET Technologies. UUNET, one of the three largest Internet backbone operators, has similarly announced plans for an aggressive roll-out of the DSL solution beginning in the Silicon Valley in the first quarter of 1997.

"Our MultiDSL strategy allows carriers and service providers to address the immediate need for high-speed Internet access at 128 Kbps with a cost-effective IDSL solution that's available now," said Ashok Dhawan, general manager for high speed access products at Ascend. "Later, carriers can use their existing MAX platform to expand to more advanced DSL technologies. No one else is even close to offering a fully integrated DSL solution with such a broad range of DSL access on a single robust central office platform. While our competitors tend to focus on one solution, at Ascend, we're implementing multiple end-to-end DSL solutions."

The goal of the joint development process was for Ascend to develop a suite of high bandwidth technologies UUNET could deploy over copper telephone lines to provide fast, upgradeable, dedicated access to the Internet.

"This is hard evidence of the benefits of suppliers working alongside their customers in the newly competitive telecommunications landscape in the U.S. Ascend is a customer-driven company which, from the beginning, was committed to providing us with a solution which is easily integrated into our existing infrastructure. MFS is the only company with facilities-based local, long distance, international and Internet services under one umbrella. Our customers have asked us for high-speed Internet access options and the Ascend suite of technologies gives us the tools to deliver a unique service," said Ronald J. Vidal, vice president of New Ventures for MFS - parent company of UUNET.

Ascend's products will include MultiDSL line cards for Ascend's MAX 4002, 4004 and MAX TNT Remote Access Servers and the DSLPipe family of end-user products. Ascend's first MultiDSL product is an eight-port line card for the MAX 4002 and 4004 platform that supports IDSL (ISDN DSL), bringing the advantages of DSL and the low cost of 128 Kbps data service to ISDN customers while utilizing existing ISDN terminal adapters at customer premises.

Ascend's MultiDSL solution, in combination with the MAX TNT carrier class Wide Area Network (WAN) access switch, allows the easy and timely deployment of a full range of services — analog, ISDN, IDSL, SDSL, ADSL-CAP, and ADSL-DMT — on a single, multiservice integrated

platform. The MAX TNT MegaPOP product, announced in September, provides a single rack-mounted box providing up to 672 dial-up modems along with a very flexible deployment of ISDN and Frame Relay connections. Six MAX TNT's can be stacked in a single eight-foot rack to service a total of 4032 dial-up ports. This is currently the highest port density Remote Access Server device on the market.

Ascend's initial MultiDSL product offering is an eight-port IDSL line card available as an option for the MAX 4002 and 4004 multiprotocol WAN access switches. These switches can have up to 40 IDSL ports, each supporting full duplex data transmission at 128 Kbps. Ascend's IDSL products utilize both Point-to-Point and Frame Relay transport protocols, thus ensuring interoperability with Ascend's family of Pipeline and NetWarp products or any other commercially available ISDN BRI terminal adapters and routers at the customer premises.

In coming months, Ascend will introduce other products supporting DSL in bandwidth from 128 Kbps to 6 Mbps. These DSL implementations will include IDSL line cards for MAX TNT, SDSL or single-line DSL, which offers full duplex 768 Kbps over a single twisted pair copper local loop, ADSL or asymmetric DSL, which has data rates up to 6 Mbps downstream and up to 640 Kbps upstream.

For the end-user, products will include the new DSLPipe family of high-speed bridges and routers, which will connect DSL users in small or home offices to enterprise networks or the Internet. The DSLPipe family will also support the range of DSL technologies, such as SDSL, ADSL-CAP, and ADSL-DMT.

The eight-port IDSL line card for the MAX 4002 and 4004 multiprotocol WAN access switch is available in the U.S. now. The 12-port IDSL line card for the MAX TNT carrier-class WAN access switch will be available in March 1997. Ascend will deliver other DSL implementations, including SDSL, ADSL-CAP and ADSL-DMT, starting in the first quarter of 1997.

Ascend Communications, Inc. develops, manufactures, markets, sells and supports products which extend existing corporate networks for applications such as remote LAN access, Internet access, telecommuting, SOHO connectivity and videoconferencing/multimedia access. Ascend Communications, Inc., One Ascend Plaza, 1701 Harbor Bay Parkway, Alameda, California 94502. Voice: 800/621-9578; Fax 510/747-2300; E-mail: info@ascend.com; http://www.ascend.com.

## **I-PASS: international ROAMING SERVICE ALLIANCE FOR ISP'S**

Internet Service Providers can save their customers money and earn more profit for themselves by joining the iPass Network, which provides members' customers with local-call Internet access in 750 cities in 159 countries. Customers save the cost of long-distance calls — over \$1 per minute for international calls — while their "home" ISP captures \$2 to \$5 per hour for providing the roaming service. Membership is free to qualifying ISPs. iPass Alliance: 55 Bryant Street #248, Palo Alto, CA 94301. (415)968-4033 or <http://www.ipass.com>

## **LIVINGSTON ANNOUNCES SUPPORT FOR LUCENT'S V.FLEX2 56 KBPS TECHNOLOGY**

Livingston Enterprises, Inc. and Lucent Technologies Microelectronics Group have announced their intention to enter into a joint technology agreement which enables Livingston to integrate Lucent's 56 Kbps modem technology into its PortMaster 3 line of access servers.

Livingston's PortMaster 3 and True Digital DSP modems are currently shipping to Internet Service Providers. The upgrade, when available, will allow ISP's to leverage their existing investment in Livingston hardware, and provide dialup access at 56 kbps.

On November 15, Lucent and Rockwell Semiconductor Systems announced their intention to make Lucent's V.flex2 and Rockwell's K56Plus technologies interoperate.

"One key reason for Livingston's success in the remote access marketplace is our commitment to standards," observes Joe Sasek, vice president of sales and marketing at Livingston Enterprises. "Because the True Digital modem architecture employs flash memory, without pitfalls of analog-based modems, support for the eventual ITU 56 Kbps modem standard is assured to be a simple upgrade."

Livingston Enterprises, founded in 1986, specializes in dial-up access and LAN-to-LAN interconnectivity. Best known for its Internet connectivity products, Livingston supplies its PortMaster Communications Server and a full suite of wide area network and firewall routers to more than 1,700 Internet Service Providers worldwide. Livingston products come with free software updates and lifetime technical support. Livingston Enterprises, 4464 Willow Road, Pleasanton, CA 94588; (510)737-2164 voice; (510)244-1903 fax; [Http://www.livingston.com](http://www.livingston.com)



# Focus On Your Business, Not Your Network



## The PortMaster

### Integrated Access Server

The PortMaster™ 3 Integrated Access Server simplifies your dial-in network by consolidating the functions of a communications server, router, and modems into a single, stackable chassis. With support for both analog and ISDN dial-in, and leased line connections, the PortMaster 3 provides the flexibility you need for your growing business.

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\* Ask for your free *True Digital* White Paper.

### PortMaster 3 Highlights

Our hot-swappable, integrated True Digital™ modems\* use a DSP for higher performance and include flash memory for easier management. The PortMaster 3 uses the Livingston-invented RADIUS for scaleable, centrally-managed, authentication, authorization and accounting. And includes free lifetime worldwide support and software upgrades.

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The PortMaster 3 continues the Livingston tradition of Internet-proven reliability established by more than 1,700 ISPs using PortMasters to run their business today.

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Integrated Access Server — 1 PRI	\$3,823
— with 24 True Digital Modems	\$9,515
Integrated Access Server — 2 PRI	\$5,473
— with 48 True Digital Modems	\$16,858



**Phone:** 800-458-9966, Ext. 76  
**Email:** sales76@livingston.com  
**Web:** www.livingston.com

## THIS MONTH'S PRESS RELEASE WINNER

**JERUSALEM** Nov. 29, 1996 - A hot new idea is catching the net by storm. It is healthy for the mind and body, and unlike all the virtual stuff around the web, its as real as the holyland itself. In fact, it is a piece of the most sacred part of this land - Jerusalem.

"Blessed is the one who walks on the soil of Jerusalem", said the prophets, Jews, Christians and Moslems alike cherish this land and love it deep from their hearts, but only few can really walk barefoot on this land. But the entrepreneurs of Jerusalem based I.G. Harmony decided to offer this opportunity to everyone, using the web as its marketing channel. The result - **Holy Steps**. They bring the blessing to reality, with a pair of insoles that comfortably fit into any footwear, and adjust themselves to the heel of every foot. They are slim, durable and well ventilated and made of environmentally friendly materials.

Made in Jerusalem, Holy Steps are providing both comfort and improved foot hygiene. But the secret is hidden inside - the soft and soothe soil of the holy city, that adds the spiritual dimension to this superb product. Each insole contains **genuine Jerusalem soil**, finely grind from the local sand, packed below a perspiration absorbing mid-layer, and a perforated top, optimized for effective foot breathing.

Insoles are offered at sizes between 6-11 for men, and 2.5-7 for women. Each pair is offered for \$9.95 plus shipping and handling and is sent from Jerusalem. CONTACT: Yossi Maivar, Tel: **972-52-454538**, Fax: 972-8-9252748, Email: [yossi@shani.net](mailto:yossi@shani.net) URL: <http://way2win.com/h>

## WEBSITE DEVELOPER ROBERT DENNY'S 11 PREDICTIONS FOR '97

### *1997 Predictions for the Internet, Its Technologies & Its Community*

Speaking at Fall Internet World, Web-Site developer Robert Denny, whose software products have been used by more than 100,000 people worldwide, made 11 predictions for 1997. Denny is well-known as the developer of the award-winning Web servers WebSite and WebSite Professional, published by O'Reilly & Associates of Sebastopol, California.

#### Denny's predictions are:

**1.** The intranet will not "take off" in 1997. Its presence in corporate America will continue to increase at a gradual rate over the next 3-5 years. Most companies that are big enough to have real intranets

amortize computers over 5 years; the average age of their computers is 2-3 years. So companies are not making large investments in the intranet now. In the end they will, but it will be over a multi-year time frame, 3-5 years.

**2.** There will be a big shakeout among Internet Service Providers (ISPs). Those that will survive will fall into two categories: either they will be among the largest, or they will have value-added services that are reliable and cheap. The ISP shakeout will not be one of consolidation, as many will go out of business. The key to capturing the business is flat rate. Even America Online has adopted flat rate pricing, which will hurt the business of ISPs

**3.** Microsoft will make inroads into the browser market, but won't knock Netscape out of the picture.

**4.** There will not be any serious collapse of the Internet, but it may get more sluggish, more often. There won't be a dramatic collapse of the Internet. It's too vibrant, too alive, and there are too many people working on the problem. So for the short-term, the Internet's capabilities look strong. Within the next few years, it may become more difficult to add publicly visible nodes.

**5.** Getting on the Internet will remain cheap, getting down to the bare-metal pricing — and it will be flat-rate. But... Pricing is low now, and there is every reason to assume it will stay there (see #2 above).

**6.** Microsoft will reveal plans to buck the Internet flat-rate trend with some form of usage-based pricing for their products. There will be lots of controversy surrounding this. Microsoft has already started down the road of user-based pricing in several ways. For example, they are promoting pricing for servers by saying, in essence, "if you want a Microsoft server that supports X number of users, you have to buy the higher priced platform that supports a server for that number of users." And their new Denali active server creates the notion of Web "sessions", which could result in charges for simultaneous "sessions", "sessions" per unit time, or worst of all, total number of "sessions", a postage meter concept. But the Web is not user-based, it's transaction-based, so it doesn't make sense to try to charge for services per user. If Microsoft actually does succeed in getting people to accept user-based pricing for Internet services, that could reduce innovation by a huge amount.

**7.** Java will fail to grow into a broadly accepted technology. Java's capabilities in the browser area are stunted. This happened because it was developed at Sun, and then Sun licensed Microsoft to do the core reference implementation for

Win32. But Microsoft wants people to use Visual Basic and Component Object Model (COM) implementation language, which is proprietary. This will limit Java's growth. One interesting question here is: where will Microsoft make its money, following their extensive investments in technologies such as Java?

**8.** Cable modems will \*not\* become popular, despite last year's hype. Their numbers will remain small as a percentage of total browsers.

**9.** ActiveX in Web pages will be a lot less important than Microsoft would like. When someone really sits down to build a Web page, they have to ask: will I restrict this to Microsoft's proprietary system? What about people with UNIX machines, Macs, etc.? I don't think people will be willing to risk having a site that only Microsoft Internet Explorer users can view.

**10.** For newcomers to the Net, live chat will become much more popular.

**11.** The sleeper technology: in 1997, someone will \*really\* figure out MB-ONE (multicast backbone) and this terrific technology will take off.

Denny noted, "The future looks less clear now than it has looked in the past 10 years. Many technologies have been floated out there—a lot of them are half-finished but the technoids are jumping on them. The big question is: will the de facto standards that have made the Internet what it is today, that have given it strength, endurance, refinement and stability — will they be replaced and to what degree by 'standards du jour' (when a big company says there is a standard but it is not in general use)? If that happens, it's possible that those qualities will be destroyed, and replaced by a technological structure that inhibits creativity at the infrastructure level."

Denny sums up his thoughts on what he considers to be the most pressing issue facing the Internet today: "It ain't a done deal that Microsoft has cornered the Internet, and there's a strong chance that they won't. This means that proprietary Microsoft-only technology won't get nearly the deployment some people might expect, with the exception of closed, intranet situations where they're willing to go 'all Microsoft'. Those who choose this route may automatically cut themselves off from the outside world, should they ever decide to use their internal information structure to communicate with users, vendors, etc. That would be a reprise of what happened with companies that chose all-IBM, and I hope we've learned from that."

Founded in 1978, O'Reilly & Associates is recognized worldwide for its definitive



books on the Internet and UNIX, and for its development of online content and software. O'Reilly developed the Global Network Navigator (GNN), a pioneering web-based publication which it sold to America Online in June, 1995. The company's software products include award-winning servers WebSite and WebSite Professional; WebBoard, a Web-based multi-threaded conferencing system; and PolyForm, a Web authoring tool. Statisphere, a Web traffic analyzer, will be released this winter.

#### **JAPANESE ISP ADOPTS U.S. ROBOTICS x2**

U.S. Robotics announced in December that Japan Telecom (JT), a major Japanese telecommunications carrier, has selected the U.S. Robotics (NASDAQ:USRX) Total Control Enterprise Network Hub as the standard for its nationwide Internet access project. Japan Telecom provides long distance telephone and data transmission services throughout Japan. The U.S. Robotics equipment will initially be located in Tokyo, in the largest single installation of Total Control equipment outside the U.S.

The U.S. Robotics equipment will allow JT to offer Points of Presence (POPs) to Internet service providers who do not wish to invest in locating their own access points throughout Japan.

"Our Total Control Enterprise Network Hub has been extremely successful since we introduced it to the Japanese market last year," said Ross Manire, senior vice president and general manager of U.S. Robotics' Network Systems Division. "Internet access in Japan is growing at a rapid pace, which represents a great opportunity for U.S. Robotics as we continue to establish Total Control as a long-term dial access platform in this market."

#### **JT to Support x2 Access: 56Kbps Downloads Over Analog Lines**

JT will take advantage of Total Control's flexible design to support U.S. Robotics' x2 technology. x2 will allow JT to offer Internet access at up to 56Kbps over regular analog telephone lines; the company can upgrade its Total Control equipment to x2 with a simple software download. JT is one of five Internet service providers in Japan that have announced they will support x2.

U.S. Robotics expects to be the first company to deliver 56 Kbps data transmission speeds over regular analog telephone lines to customers worldwide. The company's x2 technology has demonstrated widespread acceptance,

with more than 40 Internet service providers worldwide - representing a subscriber base of more than 15 million people - committed to supporting it.

"Total Control's modular design and high density give our customers in Japan the same migration path and investment protection that has helped U.S. Robotics become the leading supplier of access concentrators worldwide," said Mark Uno, general manager of U.S. Robotics' Japanese subsidiary, U.S. Robotics K.K. "We are working closely with our customers in Japan on a variety of applications, which include ISDN PRI and x2 56Kbps technology, as well as support for virtual private networks."

JT has also worked with U.S. Robotics on its introduction of INS1500 support, the Japanese standard for ISDN PRI (Primary Rate Interface), in Total Control.

Japan Telecom was founded in October, 1984, drawing on the telecommunications technology of the former Japanese National Railway. The company is one of the major telecommunications carriers in Japan, and has developed highly efficient networks with high-quality, high-volume telecommunications services. Furthermore, the company maintains easy access to all major cities through its networks running along the Japan Railway Groups' extensive railway tracks.

U.S. Robotics is one of the world's leading suppliers of products and systems that provide access to information. The company designs, manufactures, markets and supports remote access servers, LAN switching equipment, desktop/mobile client products and modems, telephony products and handheld organizers. U.S. Robotics products connect computers and other equipment over analog, digital and switched cellular networks, enabling users to gain access to, manage and share data, fax and voice information. Its customers include Internet service providers, regional Bell operating companies, inter-exchange carriers and a wide range of other large and small businesses, institutions and individuals. The company's fiscal 1996 sales were \$1.97 billion. [Http://www.usr.com](http://www.usr.com). ♦

#### **THE AGIS CURE FOR THE WORLD WIDE WAIT: COOLLOCATION**

AGIS (Apex Global Information Services), a leading worldwide Internet access provider, today announced the roll out of CoolLocation™, its new-fashioned product designed to ease Internet congestion and rapidly deliver content to Net users. AGIS is lauding CoolLocation™ as the cure for the World Wide Wait, because it attacks the dilemma of Internet congestion at its root.

The service will ease bottlenecks by providing multiple distribution centers for content providers, Internet service providers and other heavy usage sites. AGIS plans to have five CoolLocation™ facilities up and running in the United States by the end of January, and 20 by the fourth quarter of 1997.

CoolLocation™ sites will benefit Internet users and providers because it will clear "interstate highways" of excess data traffic by allowing customers to access content on a local and regional basis. When users point and click, they will be routed to the nearest available location. "CoolLocation™ takes users off the congested data highway and enables them to reach replicated content on a local or regional level," said AGIS President and CEO Phil Lawlor. "Rather than buying multiple high speed connections and storing Web servers and various other equipment at one location, heavy usage sites will be able to geographically disperse their equipment and replicate their content, providing faster access and a more enjoyable Internet experience for their customers."

AGIS named the product CoolLocation™ because customers will be able to physically collocate web servers and other networking equipment in telco grade, environmentally controlled, secure AGIS facilities. Customers will receive high speed access to the AGIS backbone, 24 x 7 technical management as well as considerable savings.

"56 Kbps modems have recently been touted as a solution for end users who are tired of waiting for files to download. We maintain that it is more efficient to clear the highway than it is to build a faster car." Lawlor said.

By the second quarter of 1997, the company will extend CoolLocation™ to include secured intranet replication services, Lawlor added. CoolLocation™ is the latest product to be revealed in AGIS' Project Millennium series of products and services designed to carry Internet users into the coming century.

AGIS (Apex Global Information Services) is a leading Internet access provider headquartered in Dearborn, Michigan. The company provides Internet access to millions of users through its significant customer base of RBOCs, Internet service providers, content providers and corporations worldwide. [Mailto://cool@agis.net](mailto://cool@agis.net). <http://www.agis.net>. AGIS, Internet Backbone Services, 3601 Pelham Road, Dearborn, MI 48124. ♦





# PUBLISHING ON THE WEB by Michael Erwin

## Part 25 - Tracking Which Browsers Visit Your Site

This month we will start taking a look at how to do some fancy CGI, DLL and SSI processing, like capturing what web browser visitors are using to browse your web site in a simple database. Why would you want to do this? Well, many of you are taking advantage of specific HTML tags and elements that only one or another of the major web browsers use. How many times have you seen something like "This site best viewed by Netscape Navigator v13.6" on a web page? Which is normally followed by a slick little animated GIF logo for the software company. Well, we want to know which browsers are most used when accessing our site. We'll cover three ways to do it.

### USING SQL COMMANDS

First off, let me tell you about a package that you might want to consider for CGI type applications that need some additional flexibility. It's called **iHTML** by Inline Information Services. This package works with Windows NT based web servers that are NSAPI or ISAPI compliant, including servers from Netscape, Microsoft and Process.

iHTML works as a DLL on the web server, adding 30 new functions without requiring any upgrades to browsers. The software parses the HTML pages to see if any iHTML extensions or code is used on the requested page. The server processes the iHTML code before sending the HTML page to the client's browser.

Inline Information Services states that it can do away with many CGI applications, and be faster than standard CGI execution, and I have to agree. I like the product and over the course of the next few months you will see me covering this new tool in greater depth.

For example the solution to our problem stated in the beginning of this month's column could be handled by the following piece of iHTML code:

```
<SQL SQL="INSERT INTO browser stats  
(browser, ip_address, referer) VALUES  
(:i_browser, :i_ip, :i_referer)">
```

In one fairly simple HTML type of tag, it will insert into a SQL database named "browserstats" the name of the browser that is being used to access the page containing this iHTML code. The above code will also insert the IP address of the requesting browser and what the URL was of the page that referred the user

to our page. All in one iHTML tag. Isn't that a cool piece of work?

Now if you don't have iHTML never fear, you can do this same thing other ways as well.

### USING ODBC

If you have O'Reilly's **WebSite Pro**, you also received **Cold Fusion**. This piece of integrated code will give you many of the basic features of iHTML. Cold Fusion calls their extensions DBML for Data Base Markup Language. To do the same thing as iHTML you will create one HTML page and one DBML page. The HTML page will have something like the following code located in it:

#### LISTING 1: COLD FUSION CODE TO CAPTURE BROWSER TYPE

```
<FORM ACTION="/~wsapi/cfusion?Template=  
nextpage.dbm" METHOD=POST>
```

```
<INPUT TYPE="hidden" NAME="browser"  
VALUE="CGI.HTTP_USER_AGENT">
```

```
<INPUT TYPE="hidden" NAME="ipaddress"  
VALUE="CGI.REMOTE_ADDR">
```

```
<INPUT TYPE="hidden" NAME="referer"  
VALUE="CGI.REFERER">
```

```
<INPUT TYPE="SUBMIT" VALUE="Boardwatch  
Main Menu"></FORM>
```

The first line in Listing 1 is the FORM ACTION declaration. This tells the browser the name of the CGI application to run and the method of passing data to the application. In this example, you will notice that the ACTION="/~wsapi/cfusion?Template=nextpage.dbm". Breaking this down even further, /~wsapi/ is the name of the directory that contains the executable cfusion CGI program. The ?Template=nextpage.dbm is a declaration of a variable named "Template" that contains the value of nextpage.dbm. Think of the usage of "?Template=nextpage.dbm" as a command line parameter passing.

The three lines of HTML code that start with <INPUT TYPE="hidden" basically create the variables "browser", "ipaddress" and "referer." These variables are hidden, in other words they will not be shown in

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information mailto:mikee@eve.net



the browser. Visitors will not even know these variables exist unless they look at the HTML code. The **VALUE** statements in Listing 1 direct the browser to tell the web server to insert the CGI variables of **HTTP\_USER\_AGENT**, **REMOTE\_ADDR**, and **REFERER** into the respective variable names.

The last **INPUT** line creates a "submit" button and places the text "Boardwatch Main Menu" in it. When the button is clicked to go into the main menu, all of the hidden variables will be posted to the CGI application **cfusion**.

Then Cold Fusion will build the next HTML page from a DBML template. In this case it will build the HTML from a file called **nextpage.dbm**, which will look something like Listing 2.

#### LISTING 2: COLD FUSION METHOD OF CAPTURING BROWSER TYPE

```
<!-- This is the NEXTPAGE.DBM for Cold Fusion DB -->

<DBINSERT DATASOURCE="Boardwatch DB" TABLE
NAME="browserstats">

<HTML>

<TITLE>Boardwatch Main Menu</TITLE>

<BODY>

<H1>Welcome to....</H1><BR>

<IMG SRC="/images/bwmenu.jpg">

etc...
```

Let's break this code down also. The first line of course is just a comment line, except notice that it uses three dashes instead of just two as in normal HTML comments. This is because Cold Fusion can actually read the standard HTML comment tag and manipulate the data stored in HTML comments. It is the second line where all of the magic happens. In this case, Cold Fusion is going to take the data that it receives from the HTML form in Listing 1 and insert the data into a Data Base table named **browserstats** that is located on the ODBC data source "Boardwatch DB." Now this is assuming that you have all of the ODBC setup and that in the table **browserstats** you have columns named "browser," "ipaddress" and "referer" that we used in Listing 1.

So you can see this is a two step method of keeping track of the visitor's browser, IP address and what site referred him to our site. I like this method for generating some fairly complex forms to access a ODBC compliant database very quickly and Cold Fusion is a pretty slick way of handling this. However, you still need either WebSite Professional or to buy Cold Fusion to use this method, not to mention having to purchase an ODBC database package.

#### USING GOOD OLD PERL

We can do some simple PERL programming to achieve something like the Cold Fusion technique without having an ODBC database. Look at the following snippet of PERL code:

#### LISTING 3: PERL SCRIPT TO CAPTURE BROWSER TYPE

```
#!/usr/bin/perl5
$user_browser = $ENV{'HTTP_USER_AGENT'};
$ip_addr = $ENV{'REMOTE_ADDR'};
$referer_addr = $ENV{'HTTP_REFERER'};

$document_root = "/var/log/httpd/stats";
$info_file = "browser.log";
$full_path = $document_root . $info_file;

$exclusive_lock =2;
$unlock =8;

open (FILE, ">>" . $full_path);
flock (FILE, $exclusive_lock);

print FILE $ip_addr," using ", $user_browser, " was
referred by ", $referer_addr, "\n";

flock (FILE, $unlock);
close (FILE);

exit(0);
```

In the PERL code shown in Listing 3, we are storing the CGI environmental variables in our named variables. Then we open a file called **/var/log/httpd/stats/browser.log** and save the information to the file. That's it. Not a great coding example, but it will do.

However, you will need to call the PERL code in listing 3 using HTML. This can easily be done by placing a Server Side Include command in the HTML page, like the one shown in Listing 4.

#### LISTING 4: SSI TO CALL PERL CODE IN LISTING 3

```
<HTML>

<TITLE>Boardwatch Main Menu</TITLE>

<BODY>

<!--#exec cgi="/cgi-bin/browsers.pl"-->

<H1>Welcome to....</H1><BR>

<IMG SRC="/images/bwmenu.jpg">

etc...
```

When the browser requests this main menu HTML page, the server will handle the SSI inside of the comment tag. Instead of inserting some information, it will just store the client information, and return to sending the HTML page. For this example to work, you will need to make sure your server is configured to handle SSI. The only server I know that *cannot* do SSI all too well is the CERN server.

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**BOOK OF THE MONTH**

Since we are on the subject of Perl, O'Reilly & Associates has come out with an updated version of their **Programming Perl 2nd Edition**. This book is 646 pages, over 200 more pages than the 1st edition. Many of you remember the original edition by its cover, PINK with a camel on it. The new edition though is an aqua color with the same ol' camel. This book is an absolute must for anyone considering or doing Perl-based CGI.

The new book covers Perl 5, language syntax, debugging, the object-oriented features, complex data structures, invocation options, program security and interprocess communication. This book is written by the author of Perl itself, Larry Wall. So to say it's authoritative is an understatement.

That pretty much covers this month's problem, which is just a building ground for future columns. In the upcoming months I am going to walk you through building a complete web based, online purchasing system. Till next time....

[mikee@access.eve.net](mailto:mikee@access.eve.net) ♦

**RESOURCES**

**iHTML**

Inline Information Service  
7305 Rapistan Court  
Mississauga, Ontario L5N 5Z4  
(905)813-8800 voice  
(905)542-9223 fax  
<http://www.inline.net>

**Programming Perl, 2nd Edition**

ISBN 1-56592-149-6  
O'Reilly & Associates, Inc.  
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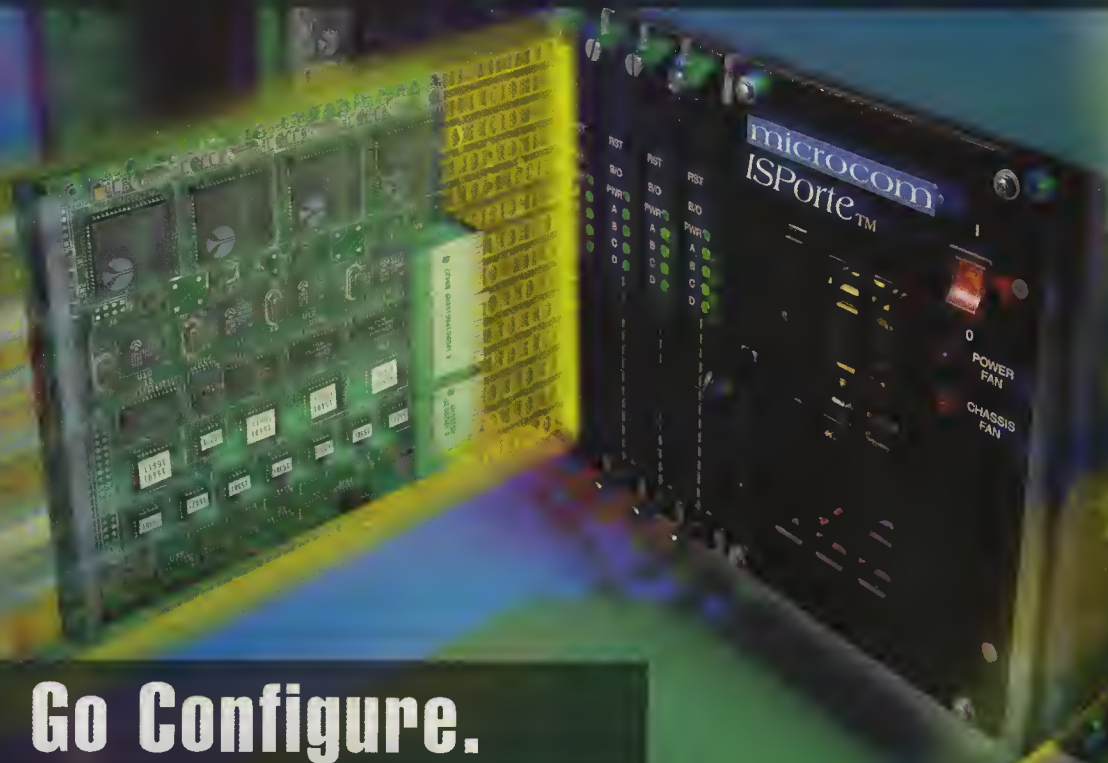
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# WEB SERVERS DISSECTED

by Michael Erwin

## STATISTICS TRACKING UTILITIES

This month I am going to do some housecleaning. I have wanted to review a couple of products that do not fit into the category of Web servers, but are web server related utilities and helpers.

A while back you might remember that I did a column on generating statistics of your web site's activity. For the most part, these were simple programs that took the text based log files and generated some sort of report or graphs. Remember **wwwstats**, a Perl program that generates a text-only HTML report. We also looked at **gwstat**, a simple graphic generator for **wwwstat**. (See <http://www.boardwatch.com/mag/95/nov/bwm10.htm> for these two reviews.) Another package called **VBstats** is a Visual Basic graph generator that comes with O'Reilly's **WebSite** server software.

Well last month I received another web server statistics package. But this time it was a full blown commercial product. It was a product called **NetIntellect** from WebManage Technologies, Inc. Not much in the Fed-Ex box, just a CD-ROM and a couple of info sheets. They probably guessed (correctly) that I wouldn't read the instruction manual.

The info sheets made the product sound interesting. "32 bit Windows 95/NT app that generates simple and easy to understand reports in table, grid or graphic formats that show statistical, demographics and marketing trends for ANY web server or Intranet Proxy server." Okay, I took the bait. I am always looking for new ways to glean statistical information from a client's web site.

So I fired up the NetIntellect software installation. It asked the usual questions like where do you want to install this software to, what do you want to call it, that sort of thing. It was finished after about 4 minutes.

Now when I clicked on the only new icon that it installed, I was greeted by a virtually empty application screen. Well, I might as well see if I can open a log file. I noticed that it installed a sample log file. Works for me.

NetIntellect took one minute and thirty seconds to analyze a 428kb log file. After it finished analyzing the log file, the screen changed to what is shown in Figure 1. Looks a lot like Microsoft's Explorer.

When I clicked on the small plus sign beside "Standard Queries", the folder opened up to reveal a list of queries. So I proceeded to double click on "Statistics by Hour." The drive whirled for a few seconds then a third window appeared, listing the number accesses and bytes downloaded each hour.

Well this was way too easy. Even most vice presidents could use this program.

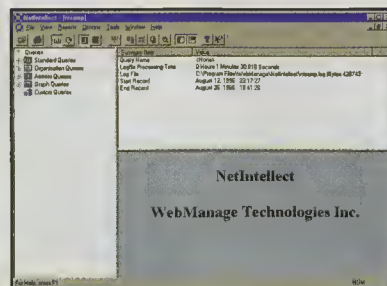


Figure 1: NetIntellect Provides Customizable Views Of Site Activity From One Control Center

Then I made my first mistake. I opened the folder called "Organization Queries" and double clicked on "Internet Organizations." The hard drive whirled, the system became sluggish and after about 8 minutes it finally returned. After adjusting the width of the columns with the mouse pointer, I had Figure 2. Now this is cool. Talk about doing some generic demographics. You might not know where the hit came from, but you can tell where the domain name is from.

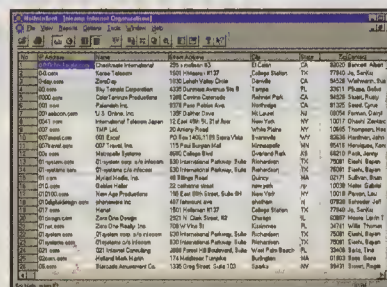


Figure 2: Count Visitors By Domain

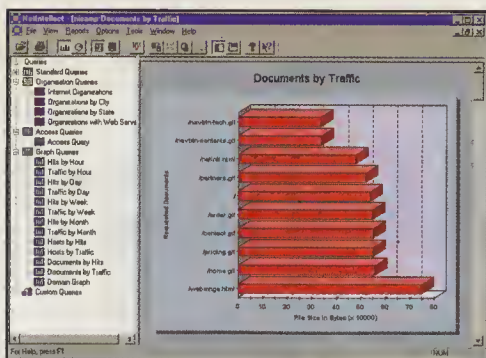
The machine I was using was *not* connected to the Net. I generated all of this information from a copy of the InterNIC's domain database. This was even cooler. No wonder it took 8 minutes to build this table. After a little more exploring, I figured out that I could change the query's properties through simple dialog boxes. This is a killer web statistics generator!

Then I made my second mistake, I clicked on the "Generate Reports" icon. The hard drive started to whirl again; this time it took about 12 minutes for the system to calm down. Then I was presented with a real-time, formatted report of the Hourly Requests of the web server. I can page through the report, but I can also print it and export the daylight's out of the data in a bunch of formats, including various flavors of Excel, 1-2-3, MS-Word, rich text and database formats. I can also send the formatted report not only to a disk file but also to a Mail server.

Well how about graphic formats? No problem. Look at Figure 3. Notice that I have expanded the folder called "Graph Queries" and have adjusted the display.

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information mailto: mikee@eve.net





**Figure 3:**  
**Graphic**  
**Presentations**  
**Include**  
**Pie and Bar**  
**Graphs**

After double clicking on the query called "Documents by Traffic," the generated graphic appears on the right hand side of the display. Notice on the far right hand side of the graph frame there is a scroll bar. I can use the standard windows scroll feature. However, instead of NetIntellect generating a completely new graph, it just scrolls the data through the graph while keeping the borders and title stationary.

By now you probably noticed the "Bar" and "Pie" buttons under the Report menu option. Clicking on the Pie button causes the horizontal bar to be regenerated as a Pie chart with a legend. You can also edit the header titles and just about everything else including the query filters so you can get just the information you want to display. Pretty slick, isn't it?

And if I can't generate the exact graphs that I want I can export the data to Lotus 1-2-3 or Excel and use the charting features within those packages to get even more creative.

Now having said all that, NetIntellect will read the log files from Apache/NCSA, CERN EMWAC, Gopher, MachIT, Microsoft IIS, Netscape, Novell, Oracle, Plexus, Purveyor, WebSTAR, not to mention the other web servers that write out common formatted logs. Which covers just about every web server I care about.

I really do like this package. It is an absolute breeze to use, it does include complete online windows help system to help you with the package. The only downside that I can see is the cost of the NetIntellect, which is **\$149.00**. But if you are trying to set yourself apart from the other web service providers in the crowd, take a look at NetIntellect. You can offer your customers great reports EASILY! Keyword here is easy. If you are still not sold on the package, WebManage even offers a 30 day free trial of NetIntellect. I plan on making this a standard package in my tool box. ♦

## CONTACT

**WebManage Technologies Inc.**

70 West Red Oak Lane

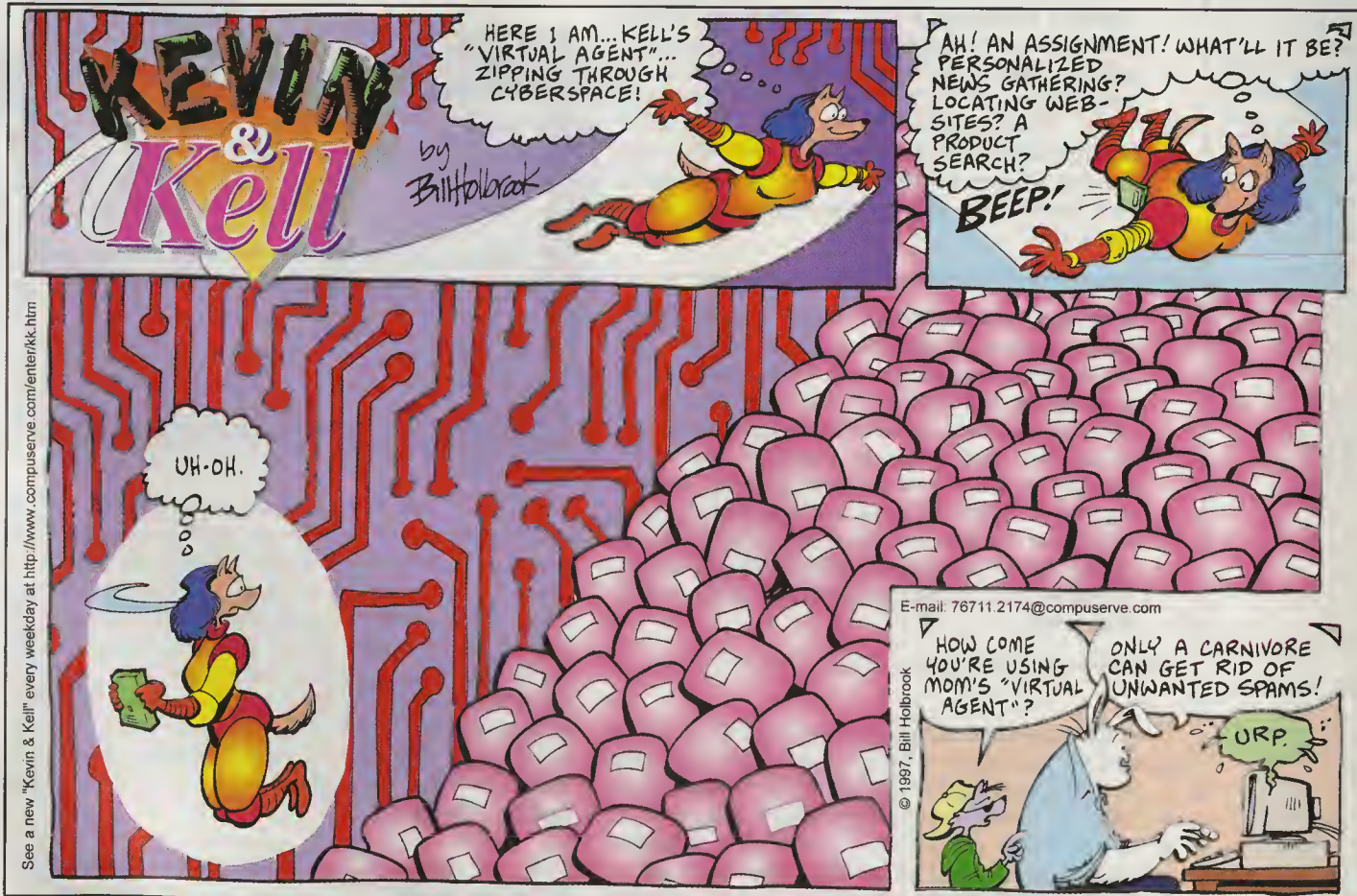
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# CONSUMMATE WINSOCK APPS by Forrest Stroud

You can't break in the new year without resolutions, and you can't talk about the future without addressing the Internet. Tie the two together and you get three resolutions that will help guide the progress of the Internet for 1997 and the years to come:

- 1. Increased bandwidth** — Looking back at 1996, the majority of Internet users were limited to 28.8 Kbps Internet connections. This has to change if the Internet is to become a mass medium that can effectively compete with television and print media for our attention. The answer? Cable modems or ADSL lines — take your pick, so long as one becomes available on a wide-scale basis by the middle of 1997.
- 2. Increased accessibility** — Like computers themselves, access to the Internet has largely been limited to the middle and upper classes of society. For this to change, either the cost of a computer must come down dramatically or an alternative solution must be developed. Well, it looks like the alternative will arrive first in the form of web boxes. These inexpensive boxes (less than \$500) are limited to web browsing, but they will bring the Net to more people than ever before. Look for web boxes from Oracle, Microsoft, and Sun in early 1997.
- 3. Increased entertainment value** — With television, the whole family can get together and enjoy an evening of entertainment. While possible with a computer, neither the computer nor the Net has delivered the level of entertainment necessary to bring the entire family together. The early answer appears to be a combination of the web and the TV that will take the Internet out of the office and bring it into the living room where all of the family can enjoy it. Sony's WebTV debuts in early 1997; expect competing models shortly thereafter.

The most popular utility ever developed has finally jumped on the Internet bandwagon. After Dark, the screen saver best known for creating the "flying toaster," offers a whole lot more than just cute animations in its upcoming version 4.0. It will also showcase Internet capabilities that closely parallel those of PointCast. **After Dark Online** uses content updated

daily by providers like *DBC Financial News*, *Sports Illustrated Online*, *USA TODAY*, *ZD Net Computing Central*, and soon *The Wall Street Journal Interactive Edition*. After Dark Online allows you to decide which providers, or channels, you want to include for your interactive screen saver/news sessions as well as the general topics within each channel that should be displayed. You can set up After Dark Online to provide news feeds from a dedicated channel (Sports Illustrated Online for example) or you can use After Dark's Randomizer to view multiple channels, including original After Dark backgrounds. The screen interface for the news feeds is roughly similar to PointCast's, with attractive graphics, small advertisements, and several short news summaries displayed on each screen. Clicking on a summary will launch your web browser with the complete article ready for viewing. After Dark Online also displays a ticker bar with the latest sports scores and stock quotes for quick perusal.

**After Dark.  
ONLINE**  
Internet News Delivery

---

**AFTER DARK ONLINE**

<b>Desc:</b>	An online news service from the world's most popular screen saver client
<b>Pros:</b>	Excellent screen saver, solid content, impressive design and interface, free news feeds
<b>Cons:</b>	Lacks some of PointCast's features, getting the specific information you want can be difficult at times
<b>Status:</b>	Freeware
<b>Company:</b>	Berkeley Systems
<b>Website:</b>	<a href="http://www.afterdark.com">http://www.afterdark.com</a>

While impressive, the initial debut of After Dark Online does fail to measure up to the current champ, PointCast. After Dark lacks PointCast's extensive personal configuration settings, weather maps and ticker feeds, horoscope and lottery information, and news ticker controls. PointCast also tends to offer greater breadth and depth in its news, although you'll likely find that After Dark Online contains more than enough information to keep you distracted throughout the work day. Finally, PointCast makes it easier to switch between channels and quickly find the information you want.

One advantage After Dark Online enjoys over PointCast is the ability to let you actually turn the

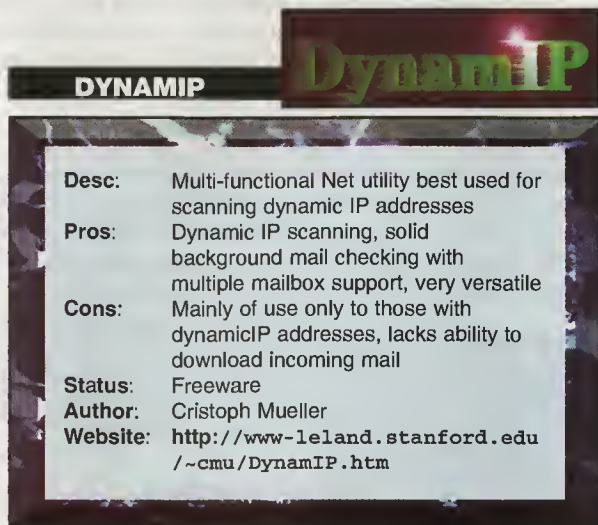
The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, <http://www.stroud.com> and <http://www.cwsapps.com>.

Forrest H. Stroud is a recent graduate of The University of Texas at Austin.

The Information Systems and Data Communications Management major is currently working as a full-time internet consultant in College Station, Texas. Stroud can be reached at <mailto:neuroses@stroud.net>.



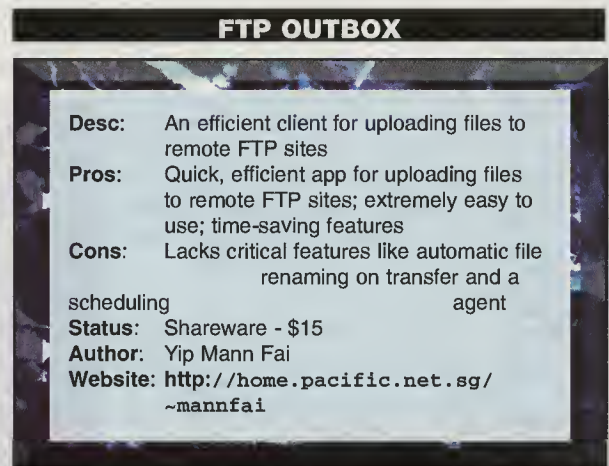
screen saver on and off at your discretion. Another advantage is that you can dedicate the screen saver to one channel, all available channels, or any number of channels in between. For many users, PointCast will remain top dog in the interactive news department, largely because it offers more information and at the same time makes that information easier to find. However, if you're a long-time After Dark fan or a regular reader of any of the five major content providers in After Dark Online, this is bound to be the perfect client for you, especially considering that (for now at least) both the client and the content are available for free.



**DynamIP** is a completely free multi-functional Internet utility. Its four major features include an IP chat engine (like using IRC, but without the need for an IRC server), IP scanning (especially useful for posting your dynamic IP address to web pages), background e-mail monitor (periodically checks for new mail on up to 5 different mailboxes), and a time synchronization tool (synchronizes your PC clock with the correct Internet time by connecting with an NTP server). DynamIP's IP scanning feature is most useful for those whose Internet address frequently changes (especially for those without dedicated lines). DynamIP will post your dynamic address to web pages and then automatically upload those files via FTP. The client also supports up to five connections for those with multiple Internet providers. With DynamIP's chat feature, you can input a range of IP addresses to scan and the client will find any users within those numbers that are also using DynamIP. You can then send messages to all of these users or to a specific user. DynamIP presents a solid selection of configurable options for each of its features and does so with an intuitive, easy to use interface. Additional features include its ability to run minimized in the Windows 95 icon tray in order to reduce taskbar clutter, tracking capabilities of all events and actions in a log file for your later use, event notification (customizable sounds to alert you when a new event occurs), AutoSense (keeps DynamIP from running mail checks when you're not connected), and AutoRefresh (gets new IP addresses for you after a disconnect or redial). DynamIP is a multi-threaded 32-bit application that will only run on Windows 95/NT platforms; for those with dynamic addresses running either of these two operating systems, DynamIP is an excellent app to have.

**FTP OutBox** is definitely an app with potential. While not overwhelmingly solid in its current release, with a few more

features it could give CuteFTP a run for its money with respect to uploading files to remote FTP sites. FTP OutBox's forté is speed and ease of usability — the client is designed to be the quickest and most efficient FTP uploading program available. Unlike typical FTP clients, you won't even need to run FTP OutBox in order to use it. Simply drag 'n' drop the files that you want uploaded to the FTP OutBox icon and the client takes care of the rest for you, including logging on, transferring the files, ensuring that the files get copied correctly, and then logging off. In addition to drag 'n' drop uploading, you can also send individual files by first right-clicking on the file you want to upload from Explorer and then selecting the respective FTP OutBox from the Send To popup menu. The file is then automatically copied to the remote server. Another great feature is the ability to upload a group of files to multiple FTP sites; just select the files you want sent and the FTP sites you want the files sent to and then sit back and watch as FTP OutBox quickly and quietly does its job.



While FTP OutBox is outstanding at uploading files, it's by no means a comprehensive FTP client. FTP OutBox lacks the ability to *download* files from remote file sites. It also won't allow you to carry out low-maintenance changes to remote file sites like creating new directories, changing file names, viewing text files, etc. Despite its shortcomings in these areas, FTP OutBox is an extremely useful client and can obviously make a webmaster's job a whole lot easier. But additional features would undoubtedly make the client even more useful. Most notably, FTP OutBox lacks automatic file renaming on transfer, which would be a major aid in activities like changing \*.htm files to \*.html or changing mixed-case files to all lower-case upon transfer. FTP OutBox could also benefit from a scheduling agent that would periodically take files from a specific directory (your web files directory) and upload the files that have been modified since the last scheduled upload. Overall, in its early release, FTP OutBox is extremely impressive. I just hope that it keeps improving by adding more usability features. The final analysis — This is one app that is bound to save you a lot of time and energy, especially if you're an overworked webmaster (who isn't these days ;-). ♦





# DR. BOB

by Bob Rankin

## YOYODYNE - PUTTING FUN INTO THE INTERNET

In the early days of the Internet, cyberspace was almost exclusively the domain of the academicians. Database theory, particle physics, and other lofty discussions were the order of the day. In the last couple of years though, it's been serious business that makes the Net hum. There hasn't been a lot of good plain fun in cyberspace, but Seth Godin is out to change that.

Yoyodyne Entertainment, brainchild of the many-faceted Godin, is on a mission to make the most popular games ever. So far, it seems to be working. Hordes of Netizens are flocking to Yoyodyne game sites in hopes of pointing, clicking and winning in a Dilbert or Dave Barry trivia contest, to name a few.

Yoyodyne runs free Internet games for prizes. So how can they afford to give away stuff like World Series tickets or a Nissan Pathfinder if the players don't pay to join in the fun? Simple — sponsors pay for the games, in the same manner that many Web sites are supported by advertiser dollars.

Sponsors of the Yoyodyne games get exposure to the players who must visit sponsors' sites to play, and players compete in a professional-quality game against thousands of others for a Caribbean vacation, home theater system, or a cool million bucks — as in the Million Dollar Webcrawl, which was developed by Yoyodyne for WebCrawler.

### EQUAL ACCESS?

In order to reach the most players, Yoyodyne runs most of their games over e-mail, although they do have some games which are Web-only. Godin and the online gamesters figure the e-mail approach is preferred by many people, because you can download your mail and play the game off-line. It makes sense — why spend your time and money online, waiting for a graphics-laden Web page to load up, just to find that the page is less game and more ad graphics?

Whether you're coming in through a heavy-duty T3 line or a creaking 2400 bps modem, you have more or

less the same chances of winning the big prize. That same egalitarianism seems to apply to their Web site as well. Most of it is text, and no 75Kb images to bog you down.

All of the Yoyodyne games require you to provide an e-mail address to play. Hey, they need to have a way to get in touch when you win the Big One, right? But they do have one iron-clad rule: No unsolicited mail will clog your inbox as a result. The company feels that the worst abuse of the Net comes in the form of chain letters, spam advertisements, and the like. So they will only send e-mail to players who ask for it, and you can always quit a game if you like.

### FUN IS MONEY

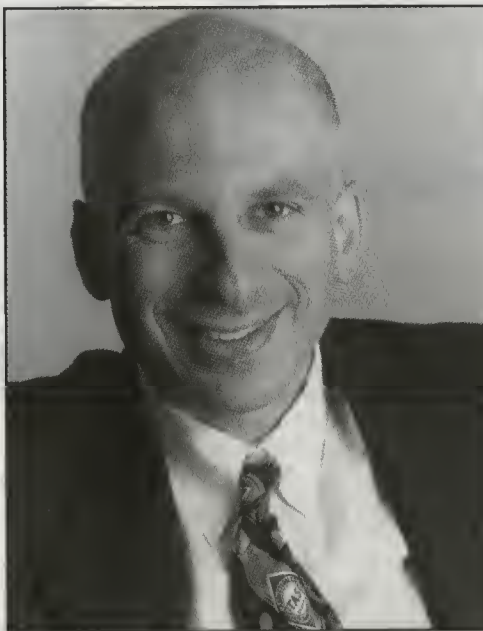
Yoyodyne's goal is, of course, to make money as well as spread fun. They figure on doing this by developing and running intriguing games and combining them with e-mail to develop and maintain long-term and affordable one-to-one relationships between the marketer and their customers.

The company's revenues are generated entirely from advertisers who sponsor the various games, and a staff of about three dozen people keep the game factory churning around the clock. The company has developed The Mighty YEG

(Yoyodyne Engine for Games), which is capable of sending and receiving "an infinite number" of e-mail messages, and determining right answers from wrong to produce a "score" for game players.

Yoyodyne has also forged strategic relationships with American Express, AT&T, MCI, Carter-Wallace, KPMG, AdAge, United Features Syndicate, Random House, GNN, Webcrawler, AOL, and CompuServe.

I recently visited Yoyodyne HQ, located in a recycled warehouse just a stone's throw from the Big Apple. Lucy the Wonderdog (Director of Office Security) greeted me while a dozen or so people busily tapped away at terminals in a bullpen filled with wires. An atmosphere of fun prevailed, with board games from years gone by adorning the walls.



**Seth Godin, Yoyodyne  
"Resident Mad Scientist"**

Bob Rankin, known as "Doctor Bob" in the online world, is a writer, computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. Bob is co-driver of *The Internet TourBus* and author of *"Accessing The Internet By E-Mail"*, which has circulated widely on the Internet, and is available in 15 languages. Send e-mail to [mailto:BobRankin@mhv.net](mailto:mailto:BobRankin@mhv.net) or visit him on the web at <http://csbh.mhv.net/~bobrankin>



I talked with Seth Godin, President and "Resident Mad Scientist" of Yoyodyne, about his online game empire and some other projects he's been involved with. While he's not inventing new games or working on his Master's in Horticulture, Godin schemes for ways to patent water. He dreams of someday having the right to say "Yoyodyne is the proud sponsor of water."

Godin has a Computer Science degree from Tufts, has logged fifteen years of experience in computer games and served as brand manager for Spinnaker Software. He specializes in online marketing, is author of several books (among them "E-Mail Addresses of the Rich & Famous") and operates a book packaging business as well. Oh, and he was also subscriber #19,857 to *Boardwatch Magazine*. Here are some extracts from our discussion.

**Doc:** *What inspired you to create Yoyodyne?*

**Godin:** I've been running my own company since 1986. In 1990, Prodigy asked us to devise a game for them. *GUTS* became the most popular online game of all time — 2 million players — and it was sort of obvious that there was a real desire for simple, fun games for the masses.

I'd say people don't like playing games. It's only about 5% of our population that makes DOOM a hit. But people do like game shows, and that's what we do.

**Doc:** *Was Yoyodyne a profitable company in 1996?*

**Godin:** We don't divulge, but we're doing pretty well. We were cash flow positive from day one, and we raised money over the summer of 1996 to dramatically increase our growth curve.

**Doc:** *Who sponsors the games and what does it cost?*

**Godin:** Sponsors include AT&T, Carter Wallace, American Express, Sprint, SC Johnson Wax, KPMG, MCI and others, along with all the online services. Games range in price from \$20K for a simple sweepstakes to \$200K for a year's worth of involved, focused, custom work.

**Doc:** *I saw the letters from winners of your games on the walls in your offices. Do you get a kick out of giving away piles of money? Any particularly touching "winner" stories?*

**Godin:** The best is Ray Burns, a 53 year old fork lift operator from Lancaster PA. Ray is recently divorced and was online looking for a date on the Web. He found a button that said "Click Here to Win a Million Dollars," and he did! It was an enormous amount of fun to give a guy that sincere such a big check!

**Doc:** *What other online gaming ventures have you been involved in? Can you highlight your biggest success and flops?*

**Godin:** At Spinnaker Software, I was brand manager for the very first generation of "multimedia." We did Perry Mason and Michael Crichton and Arthur C. Clarke adventure games with music and graphics — back in 1983. They did pretty well.

The flops are too numerous to mention. Because of our engine, we can create games pretty quickly. When we're not crazed with a client deadline, we often create experimental games on our own account to see what works. And if we don't promote it, sometimes no one comes. We did a game for *eWorld* that had 8 players. But that was a long, long time ago.

**Doc:** *You've worn lots of hats and had success in several fields. Do you consider yourself a writer, inventor, marketer, geek? Which do you identify most with?*

*"I sometimes wish I was a geek, but I'm not smart enough."*

**Godin:** I've tried to boil myself down to the purest essence of marketer. That means I invent products when none are there, rally our amazing staff of 40 to spread the word, and get as close as I possibly can to our mass market consumer. We try to build simple stuff they really want, as opposed to the snazzy new media stuff that the industry wants to sell.

I sometimes wish I was a geek, but I'm not smart enough. And yes, I'm a writer, but as much out of necessity as out of passion for the written word. We've got some amazing ideas, and I want to get them out there — in books, online, wherever the medium will support the message.

Who do I identify with? Well, Jack Rickard knows how to write. Guy Kawasaki knows how to have a good time. And Jay Levinson knows how to market.

**Doc:** *Is cyberspace going to invade the real world any time soon? What will be the real long-term impacts of the Internet on society, government, etc?*

**Godin:** I think the real world is about to invade cyberspace. Here's what to look for soon: Digital money (not credit) — this will lead to enormous infrastructure changes. Online auctions, and other techniques that make it more than the home shopping channel. And ubiquitous e-mail, built into your phone, probably. What you won't see any time soon is the Web as a replacement for TV.

**Doc:** *What things do you personally find most interesting or useful on the Net?*

**Godin:** I get and answer 150 e-mails a day, though people say I'm too brief! I confess to using the web only sporadically. There's just nothing there that I need every day, but I do like the classifieds for buying computer stuff.

As far as online shopping, I'm the target market, I think. But there's nothing there for me right now. Not yet, anyway. Except e-mail and game shows. And I'm not allowed to win the game shows...

To see what games they're running now, just send <mailto:win@yoyo.com> or visit the Yoyodyne web site. ♦

### Connecting With Yoyodyne

<http://www.yoyo.com>  
<mailto:seth@yoyo.com>

Yoyodyne Entertainment  
One Bridge Street  
Suite 26  
Irvington, NY 10533  
(914)591-9696 voice  
(914)591-7971 fax

## APOLLO TRUST - BANK AND ISP

Apollo Trust Company is an Equal Housing Lender, Member of the FDIC, and an Internet Service Provider. No typo there... when residents of rural Apollo (just northeast of Pittsburgh, PA) want to go online, they call the bank.

Apollo Trust has been offering its customers free daily Internet access since January, 1995. Customers get two hours per day of free access through a SLIP/PPP or Shell account, can create their own web pages, and do WWW-based secure home PC banking.

Ray Muth, the youthful Director and Executive Vice President at Apollo had built a popular BBS for the bank in 1994, but was dismayed that his community had no Internet access. He was certain that the Net would bring economic and educational empowerment to the economically depressed town, but could find nobody interested in providing the service.

A combination of civic duty, business sense and a hunch prompted Muth to transform the BBS into a full-fledged Internet outpost that has served to lure both hometown customers and others from far and wide to take notice. The result has been good publicity, a significant influx of new business and of course free access for the community.

### TURNED DOWN BY PRODIGY

In May of 1994, Muth was searching for a graduate thesis topic. A customer sparked his interest in the online world when he walked into the office and demonstrated how he could crudely execute banking functions through Prodigy. He then asked, "Why can't I do this at your bank?" Muth called Prodigy and was politely told that his small bank could not participate in their home banking program.

So he decided to address his customer's question and the community's negative image at the same time by making "The Future of Electronic Home Banking in a Community Bank" his thesis topic. This work led Muth to believe that a BBS was a natural evolutionary link for the future of the bank and the community.



**Ray Muth Sparked  
"Bank With Your ISP" Idea**

Muth and another bank employee constructed a proprietary stand-alone BBS that allowed customers to view information about the community and their bank balances. The online system was a hit, and it became obvious that the goodwill generated by the service would draw new customers to the bank.

### A VOICE IN THE WILDERNESS

In the Fall of 1994, Muth began to investigate the idea of providing Internet access through the bank's BBS. He asked FDIC examiners if the bank was permitted to provide Internet access, but drew blank stares. "No one had the slightest clue what I was talking about," Muth says. "I showed them our BBS and was criticized for spending too much time on something that had nothing to do with banking. The ineptitude was overwhelming."

Undeterred, Muth made numerous inquiries to the Department of Banking and was told that they were permitted as long as they didn't charge for access. Muth realized that whoever provided Internet access in the community had a great chance to influence where people banked electronically. "In addition," says Muth, "I thought there was enormous

goodwill and public relations potential by sponsoring Internet access for our library, schools, churches and municipal government. I believed that we would generate loans and deposits indirectly through our Internet efforts."

Although Muth didn't know where to begin, he got help from a college student who called to ask if the rumor about providing Internet access to his hometown was true. "I can put it together for you," Tony Hockenberry offered. "I'll do it for nothing. All I want is unlimited access on your system." Hockenberry, who administered his university's Internet system, helped Muth pull it off with an investment of \$20,000 — far less than the other alternatives Muth was considering.

### UNIMAGINED SUCCESS, UNEXPECTED VISITORS

One thing led to another and soon Apollo was providing residents with e-mail, virtual domain names, web sites, and more. The Internet exploded in Apollo. The local school district, after receiving Internet service from the bank, moved all its accounts (which averaged over \$1 million) to Apollo Trust. The local Chamber of Commerce bought the library a new computer system to take advantage of the new access, and the library became the first in Western Pennsylvania to offer all residents free access.

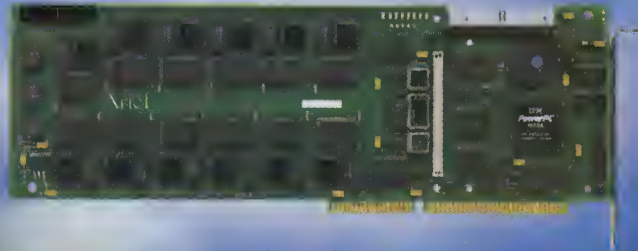
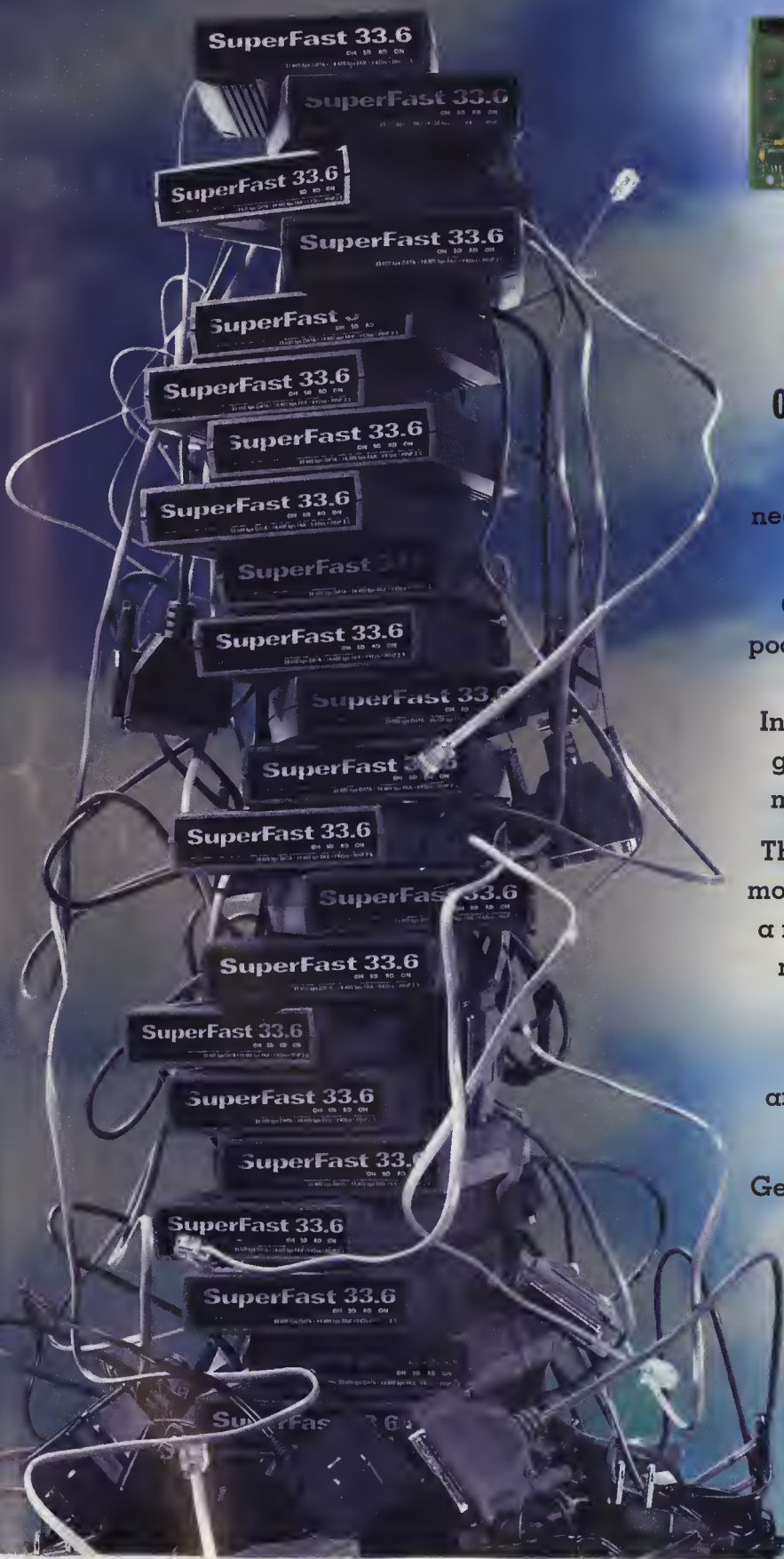
Politicians began to notice the systems' popularity. The county commissioners asked if the bank would make the Internet free for all county residents if the commission made all calls to the system toll-free from within the county. Apollo saw this as an opportunity to market their bank to a wider area and quickly agreed. Within days, they received some good-sized deposits from customers throughout the county. "They liked what we were doing," Muth says. "I could see what it was doing within our community and I knew we had a winner."

Because of their novel approach to the Internet, the bank also began to receive some great publicity. The Associated Press ran an article about their free ser-



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vice, which residents cheered. In early 1996, *CorpFinet* and *On-Line Banking Report* rated Apollo Trust Company the Number One financial web site.

***"While everyone else was using web sites to sell their bank, we were using ours to sell our community."***

"This was completely unexpected," according to Muth, "Our web site was an afterthought. We threw it together to reflect the personality of our community. While everyone else was using web sites to sell their bank, we were using ours to sell our community. Pictures of our employees and residents filled our site."

Soon after, Apollo received an unexpected visitor. The Bosnian Secretary of Education, Srebren Dizdar, was in Pittsburgh for a meeting with the University. He wanted to see this struggling community with an Internet bank that provided its residents with free access, and was eager to learn how to duplicate in Sarajevo what had been done in Apollo. Later, Dizdar returned with 16 professors to visit the bank and forged friendships that still continue.

## BIGGER AND BETTER

Using their existing capacity, Apollo added a chat area where customers could meet their foreign friends, since the Bosnians only had telnet capabilities. A collegian from Sydney, Australia, offered to facilitate the site with administrators from South Africa, Canada, Tasmania, and the US. The Internet had opened this small town bank as ambassadors to the world.

Other unforeseen opportunities began to emerge. A car dealer wanted to create a virtual showroom. The bank had the system to do it and they got his business. A real estate agent wanted to create a home page for his properties. A lawyer wanted a web site for her services. The bank's accounting firm needed a place to house its site. And perhaps most impressive, the Pennsylvania Bankers Association needed a site due to the demise of the Bankers Electronic Network. All of them turned to the little bank that could.

## MOVING TO FEE-BASED INTERNET SERVICES

As time passed, demand exceeded capacity of the 15 incoming telephone lines, but Apollo couldn't justify adding any more free lines. They still wanted to maintain free access for schools, libraries, churches, and students. And they wanted to give all citizens one hour of free access per day, but felt they should be allowed to charge for access beyond one hour.

Apollo asked the state for permission to charge, but the request was put on hold while four other service providers moved in to the area. Muth painfully watched as locals jumped to other service providers, and realized that if the bank did not act quickly, it would be left behind.

Since the state didn't give them permission to charge, the bank attorney approached it from another angle, suggesting that the bank should ask permission from the OCC (Office of the Comptroller of Currency) to form an Internet subsidiary. In September 1996, the OCC gave permission to form the subsidiary. Then in November 1996, the Pennsylvania Department of Banking followed suit and granted them permission to charge. Banks now had a unique blueprint to control their online destiny.

Today, Apollo sports a network of Pentium PCs running Linux, and a Cisco router. Their T-1 service is provided by PrepNet at a cost of about \$18,000 per year. Muth says that because the bank

already had the necessary UNIX expertise in-house, no additional staff was needed to support the ISP operations. But he also confesses to "answering about a million questions" from customers who needed help getting up to speed on the Net.

Muth believes the biggest source of fee income will come from business customers seeking virtual domains and web sites, and also sees a market for community banks that want web sites produced by a bank that has had experience in the field. But most importantly, by being the low-cost Internet service provider in the area, they can ensure that customers will have the opportunity to bank electronically with them before they are captured by the bigger electronic players.

The Apollo VP questions whether a community bank is getting any bang for its buck by merely putting up a web site without some form of Internet banking. By providing Internet access, Muth maintains, a community bank can maintain its customer base by offering its electronic banking products on the on-ramp to the Internet in addition to its web site.

Muth believes that providing Internet access is the key component to his bank's survival, and says that community banks must harness Internet technology before it harnesses them. "Imagine the marketing opportunities when your system administrators all your customer's Internet e-mail addresses," gushes Muth. "You have a captive audience. The possibilities are limitless." ♦

## CONNECTING WITH

### APOLLO TRUST

Apollo Trust Company  
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# NETTING CUBAN CIGARS

by "Zindar Mendoza"

Well, I'll say one thing for the Internet, it sure makes contraband easy to get.

In 1962, President Kennedy signed into law the trade embargo with Cuba. Until that time, the total USA market for premium cigars was about 190 million cigars. Cuban cigars made up about 9 percent of that market, or roughly 15 million cigars. The remainder of those cigars were made in the USA with Cuban tobacco. The other nations that now produce fine cigars, like the Dominican Republic, Honduras, Jamaica and Nicaragua, produced almost no cigars at all. Rumor has it that President Kennedy had his aides buy thousands of Cuban cigars for him prior to the embargo. Now for a man who smuggled women into the White House on a regular basis, and who allegedly smoked marijuana in the same White House, that isn't so hard to believe, is it?

Whether or not you buy into the purpose of the embargo, if you smoke cigars, chances are you covet the Cuban tobacco leaf. With little doubt, the island of Cuba produces the finest tobacco in the world and you can't have any; at least if you live in America and do not travel abroad. By the way, those Washington bureaucrats who support your right to be deprived, are *legally* smoking Cuban cigars, thanks to a loophole in the embargo designed to keep them happy.

More than 6 million Americans smoked 3.5 billion cigars last year. This time last year, the Cigar Association of America posted statistics that showed premium cigar imports increased 32% from the previous year (i. e., 13,550,000 more cigars). Large cigars alone increased 42% (20,400,00 more cigars). If you have been a cigar aficionado for more than two years, then you know how fashionable they have become by the price increases we've seen. A cigar that used to cost \$2.00 now costs \$5.00. A \$5.00 cigar now costs \$9.00 and the prices keep going up. What about Cuban cigars? They are going up in price also, but not at the same rate. This is because the European cigar market is not on fire like the US market. So an expensive Cuban cigar is almost on a price-par with a variety of premium non-Cuban cigars.

The Internet makes obtaining Cuban cigars a reality for those who know where to look. In fact, if you like

cigars at all, the Internet is a tool of necessity. As a Net-literate cigar smoker, you owe it to yourself to visit a few WWW pages that hold a myriad of wonderful links and a wealth of data.

Unquestionably, the two finest cigar web-sites on the Internet are the **Fuji Publishing Group Cigar**

**Pages** and the **CigarGroup**

**.Com** site. These two sites are the

mother of all cigar sites on the

Net. The Fuji pages are located at

<http://fujipub.com/cigar>.

This site is the work of Bobby

Holstein and his wife Heather.

The two of them, with the help of

Heather's sisters, have produced

the most comprehensive listing of

cigar retailers, accessory pro-

viders, humidor manufacturers,

cigar event listings, cigar associa-

tions, cigar of the month clubs

and much more. To date, they

have avoided cluttering the site

with unnecessary multimedia

add-ins and the site looks good

with any browser. Last month

they received 1 million main-page

hits between their Wine and

Spirits pages and the Cigar site.

The cigar site accounts for 80-85%

of the total number of hits to the Fuji sites. I could

spend a lot of time describing this site, but you just

have to go there.

**Bob Curtis** should be mentioned as one of the most knowledgeable cigar aficionados on the Internet today.

Bob's cigar FAQ is considered essential reading by

cyber-smokers. On the lighter-side (no pun intended),

in Bob's FAQ you'll learn how to select, cut, light and

enjoy cigars. You'll also learn how to make an inexpen-

sive humidor from an ice-chest, Oasis florist foam, dis-

tilled water and propylene glycol. Mind you that this

humidor will maintain your cigars as well as any man-

ufactured humidor on the market, with the exception

of some of the multi-thousand dollar models available

that regulate temperature. If economies of scale are

applied, my 48 quart humidor, which holds several

hundred cigars, would cost over two thousand dollars

from a manufacturer. My humidor components cost me

less than \$35.00.

Bob has managed to turn the efforts of volunteers into what Yahoo claims to be the hottest cigar site on the

Net. The result is the aforementioned CigarGroup.Com

site located at <http://www.cigargroup.com>. This site

contains links such as "Cigar Sites on the Web" and a



**Bob Curtis, author of the  
Cigar Smoker's FAQ**



"Cuban Cigar Price List". The Cuban Cigar Price List details the price of Cuban cigars for Germany and Spain. France and Canada will be added soon. The CigarGroup.Com site has an interactive database, regional listings for cigar-friendly establishments, and a periodic newsletter that encapsulates the vivid imaginations, humorous musings, and immense knowledge base of the regulars from **alt.smokers.cigars**. Perhaps more interesting to experienced cigar smokers is Dr. Marc Schneiderman's medical treatise on cigar smoking titled "Cigar and Health" FAQ which is available at the Fuji site too.

The **news:alt.smokers.cigars** newsgroup is one of the most civil newsgroups on the Internet and the only one dedicated to cigars. It is an unmoderated newsgroup that serves the cigar-smoking Internet community by presenting open discussion of all types of cigar-related issues. The topics range from helpful to absurd, but the discussion is almost always enjoyable with very little misguided flaming. Among the more interesting and helpful topics to aficionados like myself who covet La Gloria Cubana cigars from Miami, is "Who has LGCs in stock?" While my Net-illiterate cigar buddies are sitting patiently on the 11-month waiting list of El Credito for a box of **LGC Torpedo #1s**, I'm always aware of who just got a shipment, and how much they cost.

Arbitron ratings for the ASC newsgroup showed about 40,000 subscribers (before Arbitron was discontinued), and each day, almost two hundred new articles are posted to the newsgroup. The regulars in this group are genuinely interesting and knowledgeable people ranging from the likes of Bobby Holstein and Bob Curtis to "Mig" (often promoting his custom line of "dors," e.g. casketdor, hangador, etc.), Paul Harris who possesses the finest of wit and talent in the area of cigar-related limericks, and Hunter Wilson who has a self-professed affinity for cigars and wool (is it "wool" before it is removed from the sheep?).



**Alt.Smokers.Cigars  
has a Web Site at  
<http://www.cigargroup.com>**

Occasionally, some yahoo thinks he's going to make a fortune by selling Cuban cigars via the Internet and posts some topic like "Cubans for sale." This kind of post is always unwelcome on ASC, as it is an obvious attempt to lure Americans. These yahoos always get shot down by the ASC regulars. I've seen this kind of post result in dozens of ASCers contacting the ISP of the poster to alert them of the person's intent to conduct criminal activities on the Internet.

I've got news for those wannabe merchants: I can buy Cuban cigars from reputable dealers around the world at retail prices via the Internet. "Reputable" being the operative word here; there are lots of fake Cuban cigars for sale. Allegedly, these fakes originate from Cuban cigar factory employees who steal the supplies and make them as a side business. Unfortunately they do not use the exact specifications as the factory, so your cigars may not taste as good as the real thing and the construction may leave much to be desired.

## GETTING "THE GOOD LEAF"

How can you buy authentic Cuban cigars on the Internet? Easy. Visit <http://www.cigartrading.com>. This company operates from Portugal and ships authentic Cuban cigars to the USA. After six months of operation, this company has about 300 regular customers from the USA including several tobacconists. Every day 10-15 new customers from America do business with them. They find that American customers tend to concentrate on **Romeo Y Julieta Churchills** and the **Montecristo #2 Torpedo**. Be aware that they often shift their stock and your choice may not be available at any given time.



**Photo Courtesy of Bob Curtis,  
<http://www.netins.net/showcase/fujicig/bctthumbs.html>**

Want more contacts? On both the CigarGroup.Com and the Fuji Cigar pages, there is a database by Jeff Friedman entitled **I Can Find A Cigar Shop In Any Town With More Than Two Donkeys**. This database, while specifically designed to benefit the overseas traveler, serves my purpose just fine with several pages of addresses and telephone numbers of reputable shops around the world. Many of those shops will ship to the USA. Sometimes it takes a little talking, but I promise you'll come away with the stash. Always request two-day or overnight delivery and you'll find your package whisked through customs by the likes of DHL and Federal Express.

**More? Try these links for Cuban cigars:**

**St. James's Cigars** (England)  
<http://www.localnet.uk.com/havana/>

**Digital Havana** (Hong Kong - Cigar data only)  
<http://www2.hk.gin.net/~davechan/havana/Core.html>

**Canadian Cigar Company** (Canada)  
<http://www.fujipub.com/canadiancigar/>

**Cuban Cigar-Club**  
<http://www.cigar-club.com/>

**Linzbach Tobacco Company** (Germany)  
<http://www.tobacco.de/>

## LEGAL ADVICE

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# THE BETROTHED

by Rudyard Kipling (1865-1936)

*"You must choose between me and your cigar."  
-Breach of Promise case, circa 1885.*

*OPEN the old cigar-box, get me a Cuba stout,  
For things are running crossways, and Maggie and I are out.*

*We quarreled about Havanas — we fought o'er a good cheroot —  
And I know she is exacting, and she says I am a brute.*

*Open the old cigar-box — let me consider a space,  
In the soft blue veil of the vapor, musing on Maggie's face.*

*Maggie is pretty to look at — Maggie's a loving lass,  
But the prettiest cheeks must wrinkle, the truest of loves must pass.*

*There's peace in a Laranaga, there's calm in a Henry Clay,  
But the best cigar in an hour is finished and thrown away —*

*Thrown away for another as perfect and ripe and brown —  
But I could not throw away Maggie for fear o' the talk o' the town!*

*Maggie, my wife at fifty — grey and dour and old —  
With never another Maggie to purchase for love or gold.*

*And the light of Days that have Been, the dark of the Days that Are,  
And Love's torch stinking and stale, like the butt of a dead cigar —*

*The butt of a dead cigar you are bound to keep in your pocket —  
With never a new one to light, though it's charred and black to the socket.*

*Open the old cigar-box — let me consider a while;  
Here is a mild Manilla — there is a wifely smile.*

*Which is the better portion — bondage bought with a ring,  
Or a harem of dusky beauties, fifty tied in a string?*

*Counselors cunning and silent — comforters true and tried,  
And never a one of the fifty to sneer at a rival bride.*

*Thought in the early morning, solace in time of woes,  
Peace in the hush of the twilight, balm ere my eyelids close.*

*This will the fifty give me, asking nought in return,  
With only a Suttee's passion — to do their duty and burn.*

*This will the fifty give me. When they are spent and dead,  
Five times other fifties shall be my servants instead.*

*The furrows of far-off Java, the isles of the Spanish Main,  
When they hear my harem is empty, will send me my brides again.*

*I will take no heed to their raiment, nor food for their mouth withal,  
So long as the gulls are nesting, so long as the showers fall.*

*I will scent 'em with best vanilla, with tea will I temper their hides,  
And the Moor and the Mormon shall envy who read of the tale of my brides.*

*For Maggie has written a letter to give me my choice between  
The wee little whimpering Love and the great god Nick o' Teen.*

*And I have been servant of Love for barely a twelvemonth clear,  
But I have been Priest of Partagas a matter of seven year;*

*And the gloom of my bachelor days is flecked with the cheery light  
Of stumps that I burned to Friendship, and Pleasure, and Work, and Fight.*

*And I turn my eyes to the future that Maggie and I must prove,  
But the only light on the marshes is the Will-o'-the-Wisp of Love.*

*Will it see me safe through my journey, or leave me bogged in the mire?  
Since a puff of tobacco can cloud it, shall I follow the fitful fire?*

*Open the old cigar-box — let me consider anew —  
Old friends, and who is Maggie, that I should abandon you?*

*A million surplus Maggies are willing to bear the yoke;  
And a woman is only a woman, but a good cigar is a Smoke.*

*Light me another Cuba — I hold to my first-sworn vows,  
If Maggie will have no rival, I'll have no Maggie for spouse! ♦*



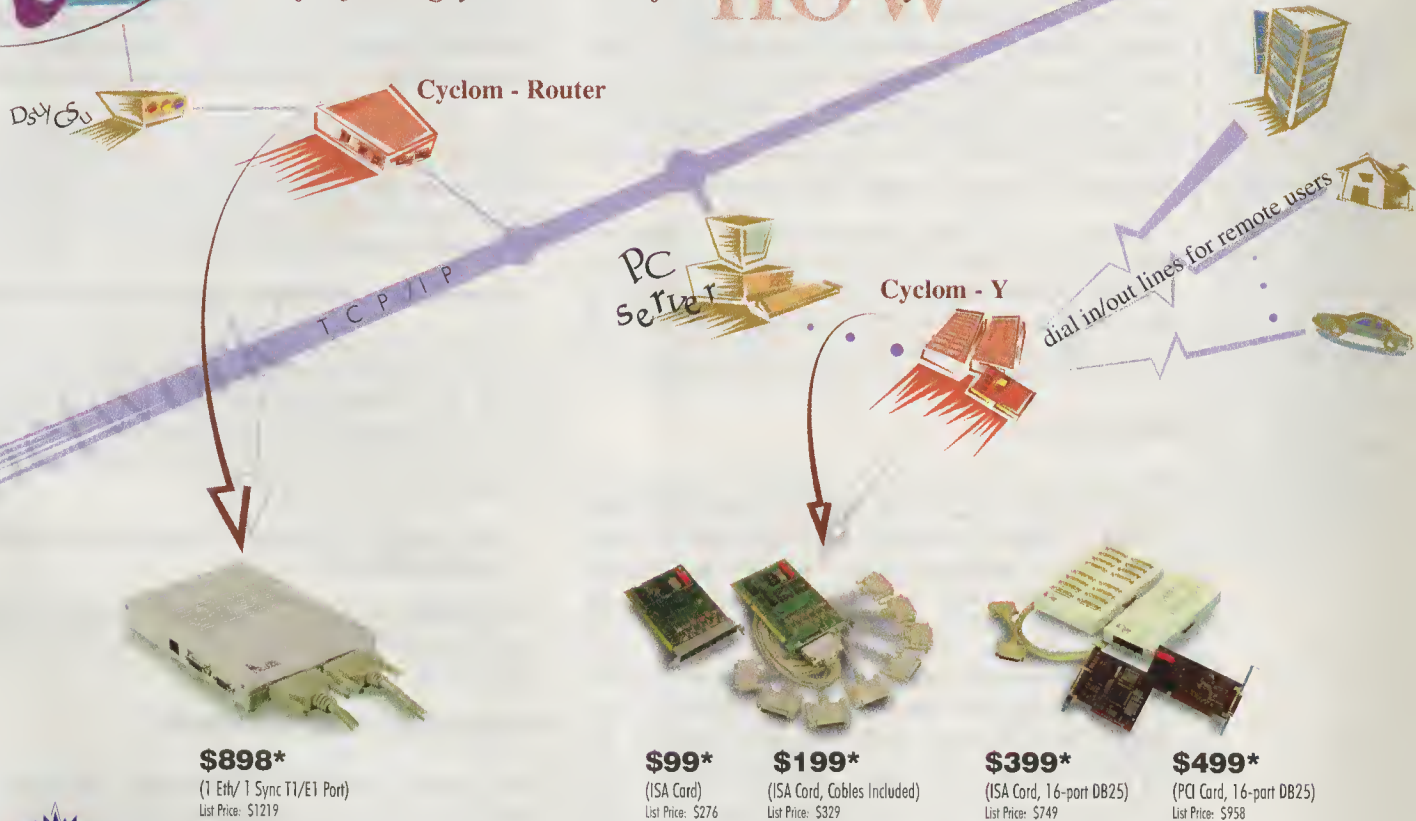
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# LINUX REDUX

by Alan Cox

Your artist refuses to give up his Macintosh, and when you ask the web designer to upload the pages to the Internet she asks what drive letter they are on. The system administrator is despairing and the project is two weeks late. Sound familiar?

Without a doubt the World Wide Web has caused many people a lot of grief as they try to merge people from disparate professions and their tools together as a whole. Linux provides the tools to allow you to keep your Windows, Macintosh and Unix environments sharing filestores and some file formats. You really can have your web server HTML directories as a drive letter, and a Macintosh folder. Linux can even read Macintosh disks and CD's with the right free software.

I've chosen to spend the first two thirds of this article looking at the various tools that enable you to try and integrate Macintosh and Linux environments. Linux is also meant to be fun so I've taken the opportunity to look at some of the emulators for Linux. Ever wanted to play Gameboy games under X windows? Read on.

## MACUTILS

The first essential weapon to anyone working with Macintosh machines is the **MacUtils Version 2.0b3** by Dik T Winter (available from most good archive sites). While Macintosh users can send and receive MIME format email files like everyone else, the applications tend to send files in "binhex" format. MIME is all very well and good and all very standard. Unfortunately it allows people to send any format of file they like, and Macintosh people tend to do exactly that. In many ways this isn't precisely the fault of the Macintosh user. The Macintosh computers have a sufficiently different notion of what a file is to Unix machines and Windows/DOS systems that most of the existing 'standard' archivers like **ZIP** and **TAR** are just not capable of encoding all the needed information sensibly.

Most Macintosh files will tend to be encoded with **binhex** and archived together with **StuffIt**. There are quite a few others but statistical evidence from my mailbox shows that binhex and **StuffIt** are the most common. The **MacUtils** kit allows you to decode most of the common Macintosh formats. Even if you do get a wonderful new format I've never met a Mac user who when asked nicely couldn't resend using **StuffIt**.

You can also use **MacUtils** to encode and wrap up normal UNIX files so that Macintosh users can handle them easily. Creating an encoded Macintosh text file would be done like this

```
macstream my.txt | binhex >my.mac
```

On the whole, once you have decoded the Macintosh file you will have no further problems. Most Macintosh applications happily generate **GIF** and **JPEG** images nowadays. Even the older programs that like **TIFF** or **PICT** files are handleable.

You should also have a wonderful set of tools called '**netpbm**'. Like many things Linux, this was written by a group led by Jef Poskanzer. It evolved from their earlier **pbmplus** program and goes back to the late 1980's. And it is essentially a set of graphic file format converters.

Most archive sites carry this essential collection of graphical convertors, and most Linux distributions include them. Each **NETPBM** program is a convertor to or from a small set of image formats. They read one format on their standard input and output another. Thus,

```
cat mac.pict | picttoppm | ppmtogif > picture.gif
```

will do the required job. While you are converting you can also process the image in other ways. If you need to cut the artists glorious technicolor masterpiece down to 16 colors so your web page doesn't end up on 'Worst Of The Web' for best abuse of a giant graphical image you can do that as well.

```
cat mac.pict | picttoppm | ppmquant 16 | ppm  
togif >picture.gif
```

The **netpbm** tools are very powerful and being command line based are very easy to build into automated tools.

## HANDLING MACINTOSH DISKS

Ok so we can read the Macintosh files. but what happens if we are given a Macintosh disk and told to get on with it. Well if its the older 800K Macintosh format nothing short of another Macintosh is going to read it. The disk format used is very strange and the disk speed is not held constant. The newer Macintosh machines read and write 1.44Mb disks using the same physical encoding as other machines. The file layout and format on the disk is different however.

Paul Hargrove is developing a Linux kernel module that handles Macintosh disks and file systems. This enables you to treat Macintosh disks as if they were ordinary Linux files. The module can be found on the Internet via the world wide web at <http://www-sccm.stanford.edu/~hargrove/HFS/>. The HFS module is very transparent to the user and very easy to use. The normal **mount** command is used to mount disks and the filestore appears to be part of the normal Linux filesystem. There is a certain amount of magic going on behind the scenes here as Macintosh

Alan Cox is the Technical Director of CymruNet, a leading Internet Service Provider in Wales, United Kingdom. Cox is also a member of the Linux International Technical Board and the CERT Vendor contact for Linux. He maintains the <http://www.uk.linux.org> web page and leads the Linux Networking Project, the project to port Unix to shared memory multiprocessor architectures, and a project to port Linux to 8086 embedded controller systems. Send e-mail to [alan@cymru.net](mailto:alan@cymru.net)



people can (and do) put / in file names but separate directories (or folders in Macspeak) with a ':'. Trying not to put a ':' in a file for a Macintosh user, much like trying to keep 8.3 format names for DOS users, is generally a good plan (Unless of course you don't actually want them to read your data too soon).

When you are looking at Macintosh files you may be surprised to find various additional directories on the disk, that definitely were not present on the Mac. This is because the notion of a file on a Macintosh isn't quite the same as on most other computers. The Macintosh file consists of multiple 'forks'. Each of these holds part of the information about the file. Things that other operating systems carry around elsewhere (or completely ignore) such as the application a file was created by are instead held in parts of the file. In a cross platform environment presenting the entire Macintosh data would be a nuisance rather than a help as normal tools would not expect the extra forks and information. All of a sudden all your Macintosh .GIF files wouldn't be readable by Unix tools. Instead the HFS module places all the additional Macintosh information into hidden subdirectories or specially named files. HFS supports a collection of different methods for hiding the additional data, including the highly useful "netatalk" encoding. Linux supports netatalk (see below) and the combination will allow you serve Macintosh disks and CDROMs to Macintoshes using a combination of the HFS module and netatalk.

## SERVING FILES TO A MACINTOSH

Finally if you remember I commented earlier that you could make your web server a folder on a Macintosh. **Linux 2.0.x** is capable of speaking the **Appletalk** protocol and talking directly over ethernet to Macintosh machines that are configured with an ethernet card and set up for **'Ethernat phase II'**, which is almost any Macintosh running a non-prehistoric version of the MacOS. The Linux side of this facility comes in two components. The first is the kernel support for the low level Appletalk protocols. The second is 'netatalk', a set of daemons and user programs that were written by the University Of Michigan. The netatalk software allows the Linux system to offer file sharing and printing facilities to the Macintosh systems. With netatalk installed, your Linux box becomes an Appletalk router, file and print server. Macintosh users can see your machine in the chooser (their network selection tool) and use it like any other disk. You can even create a user

who owns the web space and allow them to use that to place their HTML files and graphics directly onto the web server while you get another game of Quake in.

Netatalk was developed by a group at the University of Michigan. There is a FAQ on netatalk at <http://www.umich.edu/~fsug/netatalk> and an unofficial Linux HOWTO at <http://thehampsons.com/anders/netatalk/>. The program itself is available by ftp at [terminator.rs.itd.umich.edu:/unix/netatalk/](ftp://terminator.rs.itd.umich.edu:/unix/netatalk/).

Hopefully next time you get given a Macintosh disk the response will no longer need to be "Oh no, not again".

## ENOUGH OF THE USEFUL STUFF, ITS TOY TIME.

And now for a completely different topic. No Linux box is complete without toys and since both Executor and Wabi for Linux are about to be released in non-beta form, emulators seems a fun topic. For this issue of the magazine I'd like to nominate the Virtual GameBoy (<http://freeflight.com/fms/VGB/>) as my nifty toy of the month. This excellent little X windows application allows you to run almost all the GameBoy games on your Linux box. You'll still need to buy the games but you won't have to fight that annoying little screen any more. The GameBoy folks also win they geek of the month award for the Linux GameBoy C cross compiler kit and for the guy who managed to write BASIC for the GameBoy and then wire a Macintosh keyboard to it. Scary people.

The Gameboy games have widely been extracted from the cartridges and are available many places on the web. Adrian Martuccio has a pretty good collection available at <http://www.ecr.mu.oz.au/~amart/>


Of course if the Game Boy isn't quite your scene you'll be glad to know that older computers make an ever stronger showing in the handy emulation collection. Vice will emulate the Commodore 64, the VIC20 and for those of us old enough to remember it the Commodore Pet, oh and better still its free. For those readers who are still thinking these are all too modern you can pick up CP/M emulators, Apple II emulators and even PDP8 emulators. Check <http://www.freeflight.com/fms/comp> for a glimpse into the world of emulation.

Back to the emulators you have to pay for. WABI for Linux has been released. It is derived from the same product Solaris folks will already be familiar with. WABI

runs most major 16-bit Windows applications under X11 and allows you to keep around those Windows office programs you just haven't got around to replacing yet. **WABI** is available for \$199 from Caldera Inc, <http://www.caldera.com>, who also sell things like Word Perfect and Corel Draw for Linux.

**Executor** is an emulator that has turned a few heads. Using very clever 'Just In Time' emulation technology it runs Macintosh software under Linux on a reasonable PC at speeds comparable to many Macintoshes. Or to put it in practical and meaningful terms - Mac Lemmings is nice and playable. Executor is available from ARDI - <http://www.ardi.com/>

I think next month I'll look at some of the reasons you don't actually need to be running Windows and DOS emulators anyway, except for playing games. Perhaps you've got something else you'd like to see covered - security, SSL web servers, backup tools whatever. Send me an email or catch me at Usenix/UseLinux in January see <http://www.usenix.org> for details. ♦



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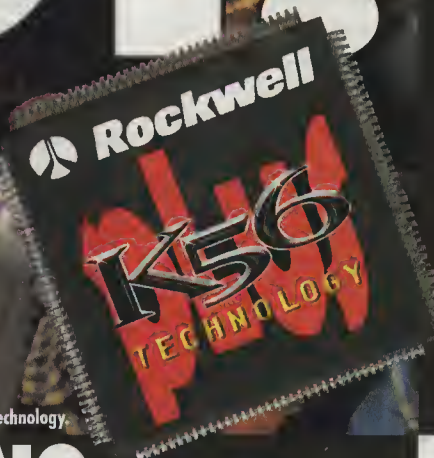
For all the recent talk of faster modems, there's one plain fact that stands out.

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# U.S. ROBOTICS LAUNCHES THE NEW BATTLE - 56 KBPS MODEMS

by Jack Rickard



Concurrent with the fall COMDEX show in Las Vegas, a new and in some quarters unexpected battle has broken out over modem technology that we think is significantly more important than currently recognized in the wider world of personal computers and the Internet.

In the earlier days of online communications, modem technology drove most new advances online. Speed was the restriction that prevented large graphics, sound, and other media from efficient deployment online - never mind such bandwidth hogs as video. With each increase in modem speed from 300 to 1200 to 2400 to 9600 to 14,400 bps, a new wave of applications and utility became feasible. At 28.8 kbps, it was widely believed we had hit the end of the trail as to what could be done with today's analog telephone service - other wise known as Plain Old Telephone Service or POTS. With a little final tweak up to 33.6 kbps, an almost insignificant increase from 28.8 kbps perceptually, it was widely considered finished. Advances to higher speeds would require a new medium - cable modems, wireless, or such exotics as ADSL or ISDN. But 33.6 kbps was considered the end of the trail for POTS.

Suddenly, it would appear not. An enormous battle is breaking out over a sudden deployment of modem technology that can DOUBLE today's 28.8 kbps links to 56.6 kbps, and actually

even slightly higher in some installations to over 61 kbps. After having played with this speed hands on, I can tell you it DOES make a difference, and it will be popular. The web is dramatically better at 56 kbps.

But along with the advance comes a return of a fairly senior problem - standards. At many of the leaps from one speed to another, the breakthrough came through proprietary modem technology owned by one vendor. Market place confusion, incompatibility, and a good deal of angst inevitably followed as those trying to communicate also tried to gain a common technology set with which to do so. It's back. We have at least two incompatible technologies and it would appear at least 18-24 months before it shakes out to a unified standard through the International Telecommunications Union. Meanwhile, the stakes are enormous.

Essentially, two camps, one led by U.S. Robotics, probably the largest retail modem manufacturer in the world at this point, and the other led by Rockwell, inarguably the leading modem chipset maker, have each announced competing technology for 56 kbps modems. This battle is almost a subset within a larger battle over modem architecture or even the architecture of all peripherals. Which is better? Peripherals based on generic digital signal processor chips with all the functions in software



that can be upgraded by FlashROM? Or inexpensive monolithic chipsets efficiently designed for one economical function.

## FIRST - WILL ANYBODY CARE?

Yes. But it is interesting the number of industry players whistling in the dark over this one. We have repeatedly heard a kind of sneering chant that if end-users want faster connections they can always go to ISDN. Integrated Services Digital Network was first proposed in 1978. As of this writing, it STILL remains undeployed in large areas of the country. In Silicon Valley and under the purview of Pacific Bell, it is actually quite widely available at a reasonable cost. Bell Atlantic has likewise been progressive in making ISDN available within the past two years. But it remains in most areas either quite expensive, or not available at all.

Here in US West territory, a 2B+D BRI ISDN (two 64 kbps "bearer" channels and one 16 kbps "D" or supervisor channel - Basic Rate Interface) line for a home subscriber runs some **\$68** monthly. It does allow a very nice 128 kbps connection, particularly when used with a bridge/router device such as Ascend's Pipeline 50. But it is not inexpensive. The Pipeline 50 is over **\$900** compared with modem prices at something over **\$200**. And the Internet Service Provider has to provide a 128 kbps ISDN port. This naturally consumes more bandwidth, but THEY also have to pay the higher cost for an ISDN link to the telephone company - either a comparable 2B+D, OR a larger capacity Primary Rate Interface (PRI) ISDN service. PRI consists of 23 of the 64 kbps bearer channels plus a single 64 kbps supervisor channel (used for call setup, etc.) In some areas PRI ISDN DATA is available with a full 24 64 kbps channel.

The result is that nationally, of 3068 Internet Service Providers listed in our Fall directory, the average price of a 128 kbps ISDN link was **\$99.50** per month. Here in Denver, that would indicate that the end user needs to pay some **\$900** for equipment, and **\$167.50** per month for telephone charges and ISP charges. This while 28.8/33.6 kbps dialup accounts are readily available at less than **\$20** per month, and 28.8 kbps modems now available for slightly over **\$100**. ISDN is not an economical option for most. And it is only available through slightly over 40% of the Internet Service Providers in operation.

The new 56 kbps technology, from the end-users point of view, means a new modem probably somewhere between **\$200** and **\$300**, or perhaps a downloadable FlashROM software upgrade for their old modem - at less than **\$100**. They might pay a slight premium over the **\$20** dialup account - to **\$25** or **\$30**. We doubt they'll have to.

Will this go? Callers are ALREADY beating up local Internet Service Providers over the availability of 56 kbps connection when even the modems frankly just aren't quite available yet. The thirst for more speed online IS and ALWAYS HAS BEEN insatiable and indefatigable, as long as the price is low or better - very close to free. This one will probably be very close to it for end-users.

A couple of provisos. First, if you are in a local dialing area with an old and noisy local loop infrastructure, you may not be getting 28.8 kbps connections now with your 28.8 kbps modem. If you're regularly making the link at more like 24 or 21 kbps, the 56 kbps technology probably won't help you at all. You can upgrade to a 56 kbps modem, and STILL get a 21 kbps connection.

Second because of the way this technology works, it is inherently asymmetrical. They can do a 56 kbps transmission TO you but the back channel from end-user to ISP remains topped out at 33.6 kbps. We'll explain why in a minute. Since Web surfing is where the speed is most needed, the traffic is even more asymmetrical - a 100 KB graphic file DOWN from web server to end user, and a mouse click or form submission back UP is all that typically transits in the reverse direction.

## HOW 56 KBPS WORKS

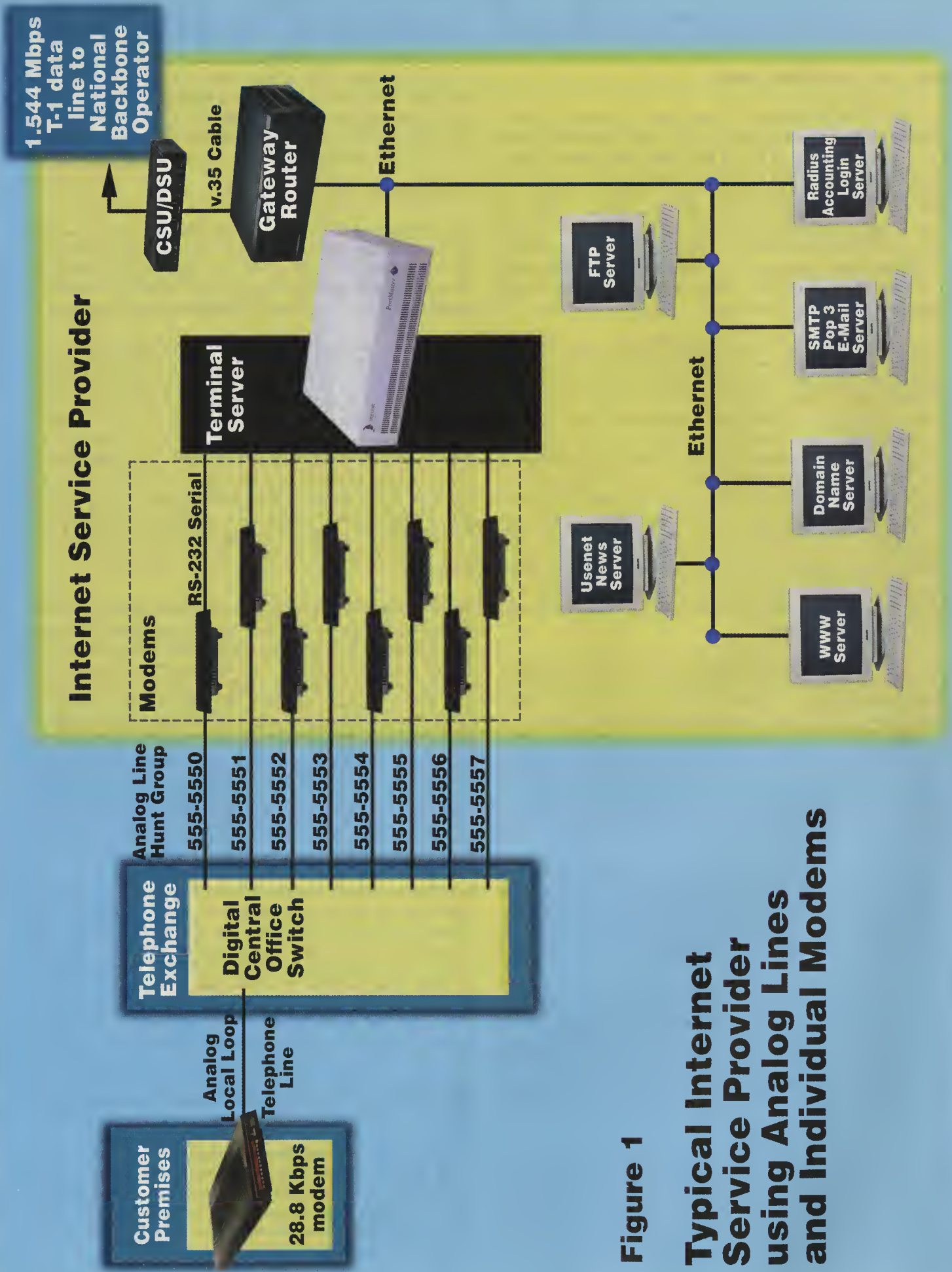
The evolution of 56 kbps modem technology actually seems to start with a technical paper issued in France several years ago. The basic premise is that the way people use modems has changed dramatically over the past few years, and half of the actual connection doesn't use POTS analog telephone lines at all.

In the early days of modems, you connected more or less where you could. That might be a commercial online service like CompuServe, or Genie, or it might be to a local BBS or a BBS in another state - or even country. It could even be a direct dialup connection between your PC and a friend's using ProComm Host for example. Actually, almost any terminal program could be used to answer. And people dialed not only local numbers, but bulletin boards and online services six states away, or even quite commonly internationally. Modem features were quite important, quality of connection was quite important, and the consumer tended to be very much informed on what they were shopping for in a modem.

Within the past two to three years, this has changed markedly. By dialing an Internet Service Provider via a local call, you get a connection to a packet network whereby then you can make further Internet Protocol (IP) packet connections to services all over the country and indeed around the world. But the modem only dials one place - the local ISP. And for most Internauts, that's the only place their modem EVER dials. As such, features are now relatively unimportant, and about the only question the consumer has is how much does the modem cost, will it do the fastest speed my ISP supports, and if I need to configure it, will the ISP know how to help me configure it correctly. The modem has emerged as a device tethered to a single local call, and the selection of modems has become a function of which works best with MY Internet Service Provider.

And this connection has changed too. Figure 1 depicts an analog setup for an Internet Service Provider. Early providers virtually all worked this way. You dialed a modem just like yours, connected to an ordinary analog telephone line. The modem was connected to a dumb terminal server, typically something on the order of a Livingston Portmaster. This terminal server hosted the modems using RS-232 serial connections, and was itself connected to the ISP local LAN via ethernet. The LAN was connected to a gateway router that in turn was connected to a 1.544 Mbps leased data telephone line, using a Customer Services Unit/ Digital Services Unit (CSU/DSU) as an interface. This leased line connected the ISP to a national backbone operator.

The ISP local LAN also hosted a number of other computers, usually PC's running UNIX or Windows NT. Some of these servers were used to perform password login and authentication, accounting chores to detect how long you were online, etc. Others were mail servers hosting your electronic mail, or web servers hosting local web pages.



**Figure 1**

# Typical Internet Service Provider using Analog Lines and Individual Modems



## Internet Service Provider

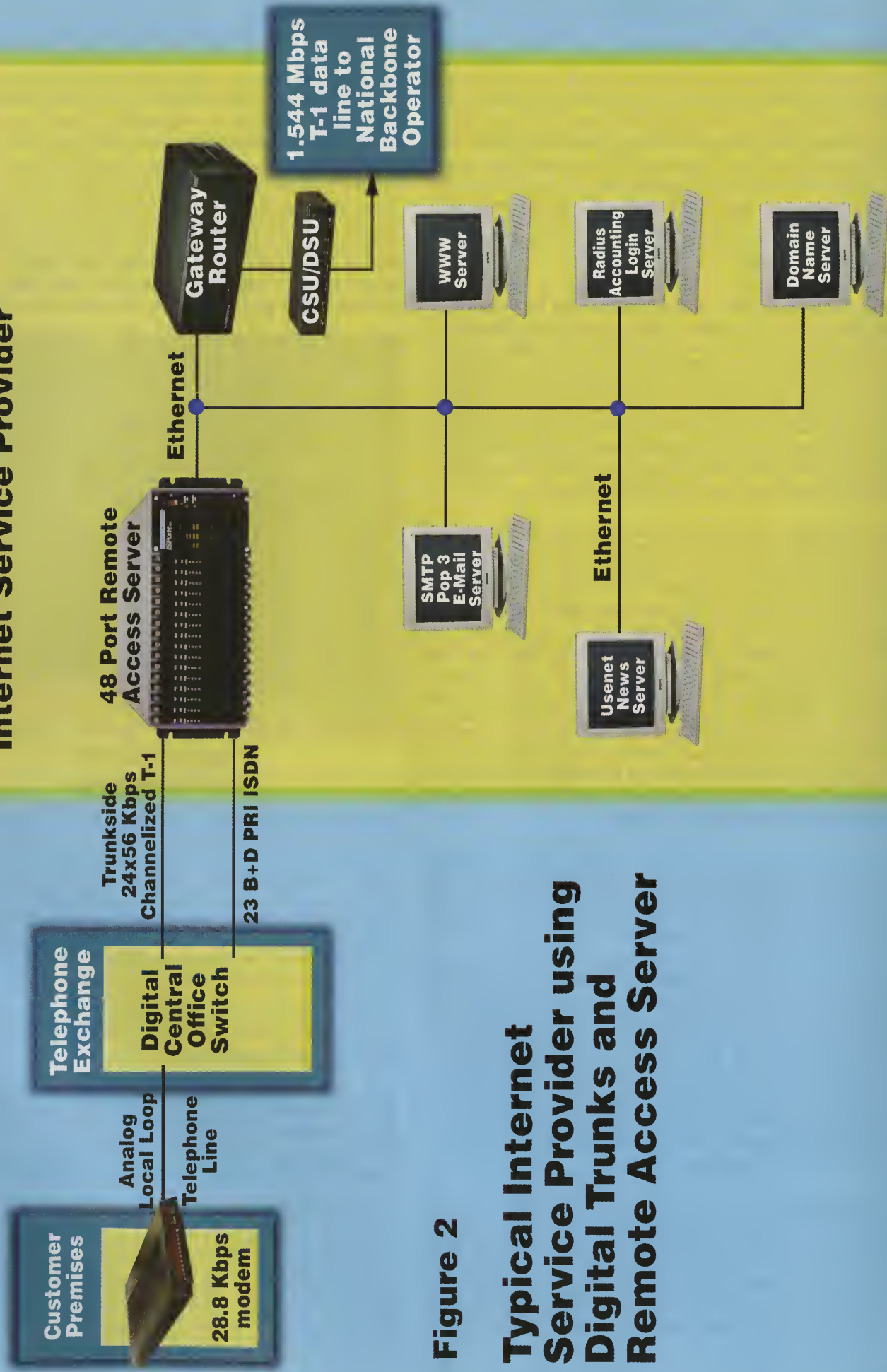


Figure 2

## Typical Internet Service Provider using Digital Trunks and Remote Access Server

Typically the terminal servers could handle eight or sixteen modems. As the ISP business grew, it was common to grow to a hundred analog telephone lines or more - in some cases many more. The result was 100 individual analog telephone lines, 100 individual modems each with their own serial cable, power supply brick, and heat problems, along with six or seven terminal servers. The analog telephone lines are all on a "hunt group" where customers dial a single number and the telephone company automatically cycles to the next available line in the series with each call. In some cases, ISPs would have different hunt groups for different services, with 60 lines for 14.4 kbps modems and 40 lines for 28.8 kbps modems, for example.

At some point of growth, all of this gets a little bit hard to deal with. We've had ISP's relate to us that in a roomful of modems, on some occasions if one went down and was causing problems, it was actually easier to call the telephone company and have that LINE disconnected and removed from the hunt group than it was to go into the room of horrors, locate the failed modem, and disentangle the entanglements of telephone lines, power cords, and serial cables connected to it. We also heard of one case of an ISP in Texas that actually had over 3500 pair of analog POTS lines run into a single office location.

There are some solutions to this. First, you don't need all those telephone lines. The telephone companies for years have sold T-Carrier type 1 (T-1) lines for a very different purpose than many in the Internet are accustomed to thinking. T-1 lines as used by the business community for voice communications are more typically configured as a single telephone line consisting of 24 digital "channels". Some 24 lines are essentially digitally multiplexed with each channel receiving 64 kbps of bandwidth corresponding to an 8-bit digitization of 8000 Hz in audio frequency. In actual operation, signaling and call setup require the use of some bandwidth to ring the phone and signal which line is being dialed etc. The telco basically borrows some of this bandwidth from the total, and these "rob bits" bring the actual bandwidth available for audio down to about 56 kbps.

So it is possible to bring in a voice T-1 and put 24 "telephone lines" on a single telephone line with a single RJ connector. But you do need a demultiplexer at the customer premises. For voice communications, these are often built into the PBX equipment operated by the business.

For data communications, a number of vendors have devised modem boxes that allow you to plug in several of these T-1 lines with the demux built into the box. In this way, you can typically connect two of these T-1 lines into a single rack-mounted device that contains modems on plug-in cards. The box might contain 48 modems, and handle two of these 24 channel T-1s. So 48 shelf modems, serial cables, along with three terminal servers, all the power bricks, serial cables, etc. are replaced by a single rack-mounted box with two telephone lines and a single 10BaseT ethernet connection.

These devices are commonly referred to as Remote Access Servers. And the pace of technological development in this area has recently become very rapid. Several vendors have developed 7-inch rackmount boxes with as many as 128 ports, and they are almost endlessly "stackable" to serve as many lines as you need to in any given Point of Presence (POP) location. Cascade has developed a larger device that currently supports over 600 ports.

Ascend may be the king of the high density devices for large installations. While their Max 4004 is very popular with mid-sized Internet Service Providers - the company announced a new device in September they call the MAX TNT MegaPOP that is essentially a monster. The TNT allows you to connect up to 28 channelized T-1 lines, or a single T3, to the telco central office and support 672 dialup ports concurrently from a SINGLE rack mounted drawer. And it is very flexible between supporting standard dialup lines, ISDN ports, and even up to 150 T-1 Frame Relay ports. Total price for 672 ports is around \$435,050 depending on the configuration specifics. You can stack up to six of these drawers in a single eight-foot rack to put down 4032 dial-up ports in one place - for roughly \$2.5 million. While this sounds like a LOT of ports, it reflects the direction that some of the larger ISP's are going to meet the demand for dial-up access.



**Ascend's MAX TNT  
672 Dial-up Ports**

Figure 2 shows a block diagram of an ISP using a Remote Access Server and digital trunk to replace all those analog lines, modems, serial cables, and terminal servers. Note that as a byproduct of this, using either 24 channel T-Carrier, or Primary Rate Integrated Services Digital Network (PRI ISDN - 23 full 64 kbps channels and one 64 kbps signaling channel or 24 X 64 kbps), the ISP is actually connected to the telephone company central office switch with a DIGITAL connection. The vagaries of inductance, capacitance, noise, echo, etc endemic to plain old telephone service analog lines are no longer of consequence. For that segment of the connection, from ISP LAN to telco central office, we are already data.

The new 56 kbps modems take advantage of the fact that many ISP's have this digital connection, either through 24 X 56kbps channelized T-1 lines, or through PRI ISDN. Note that these lines are connected to the telco central office switch directly or TRUNKSIDE as opposed to LINESIDE.

#### **LET'S GET TECHNICAL**

The following shouldn't be published in a magazine -ever. J-School Graduates - DON'T TRY THIS AT HOME. But we're going to attempt a simplified explanation of how modern modems work, why an increase to 56 kbps connections over regular analog lines is feasible, and why it will only work at that speed in one direction.



Modems are designed to pass digital data over analog telephone lines designed to pass audio in the frequency range of near zero Hz to just above 4000 Hz. There's actually about 3500 Hz of this that is usable by a modulated audio carrier.

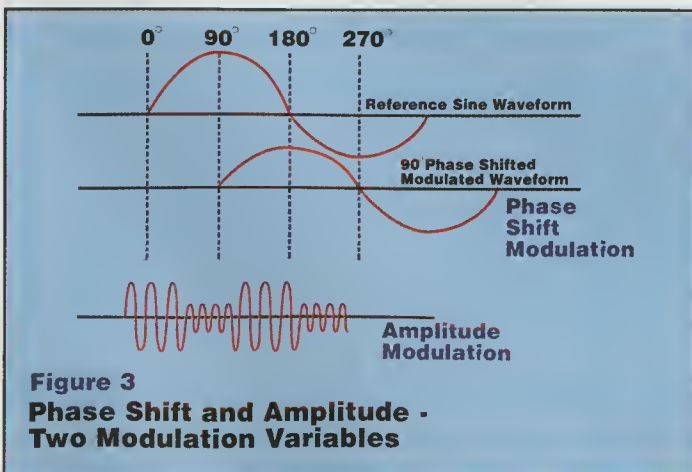
The classic explanation of modems is that they convert digital bits and bytes to a series of audio tones by **MODULATING** a carrier. And at the receiving end, they **DEMODULATE** this carrier by detecting the tones and converting them back into digital bits.

Actually, this has been only conceptually true for over a decade. At about the point of movement from 300 bps to 1200 bps modems, the entire concept of **TONES** went out the window. You simply can't pass tonal changes over analog lines much faster than 600 times per second. Recall that we used to refer to the speed of modems as **BAUD**. Baud refers to the state change transmitted which in the frequency modulation days was equivalent to the number of bits per second transmitted. Today's modems encode data to allow each change in state in the audio waveform to represent a variable number of data bits. So the entire concept of **BAUD** becomes somewhat irrelevant. We want to know how fast data can transit the connection in bits per second (bps) or characters per second (cps). What you have to do to the waveform to get them there is not terribly interesting.

This was done by varying two waveform variables that can be controlled and using them to symbolically represent data. One thing you can do over analog lines is make a sound wave or carrier **LOUDER** or softer with regards to varying its **AMPLITUDE**. The other thing you can alter is the frequency or pitch of the carrier. But with regards to frequency, you can actually detect more minute changes in **PHASE** of an audio carrier wave by comparing it to a reference carrier. The audio carrier is essentially a sinusoidal oscillation that goes through a 360 degree cycle with each oscillation. We can detect fairly small phase differences between sinusoidal waveforms. And so phase-shift keying or **PSK** became a preferred modulation technique. Since this requires a stable frequency, frequency modulation has largely been abandoned.

Using these two variables, phase and amplitude, we can use the various state combinations as **SYMBOLS** to represent binary data. In this way, we can transmit a number of binary bits via a single symbol. Let's look at a simple example:

First, audio or sound is a simple oscillation or vibration. The nature of such vibrations is that they are regular, and they are



repetitive. The rate of repetition is of course the frequency. The higher the speed of the oscillation - the higher the heard "pitch" of the tone. But the oscillation itself appears as a sine wave as shown in Figure 3. One complete cycle of the wave can be marked off much as you would a circle, in degrees. By comparing an audio sine wave with a reference, you can detect the "difference" in the two waves as a function of "phase angle."

Two modems, in the process of the initial handshake, can synchronize internal reference generators to establish a reference waveform. They can then transmit phase modulated waveforms between them. By comparing the received modulated waveform to the reference waveform, they can detect phase angle differences. We can use these phase angle differences to represent data.

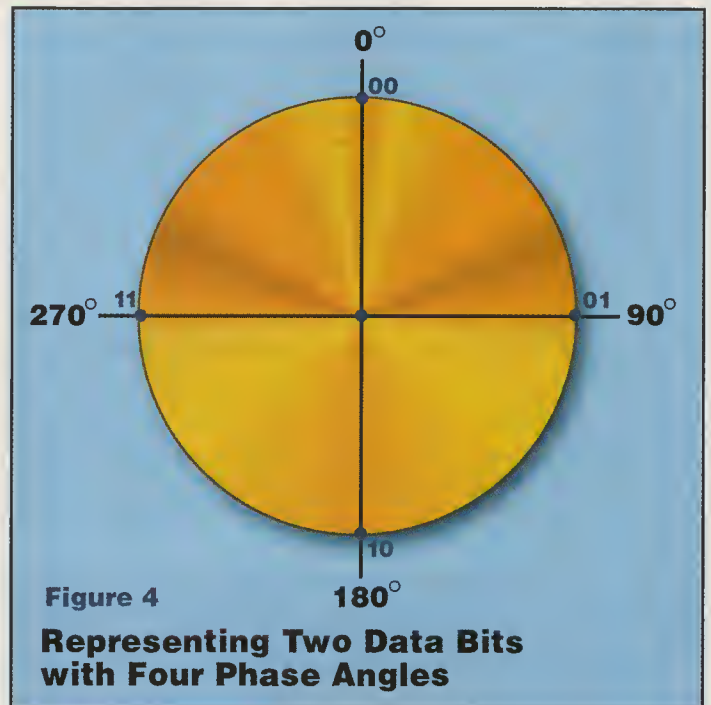


Figure 4 shows phase angles of 0 degrees, 90 degrees, 180 degrees, and 270 degrees. We can arbitrarily use these phase states to represent binary data as follows:

0 degrees	00
90 degrees	01
180 degrees	10
270 degrees	11

Note that by transmitting a **SINGLE** symbol in one of **FOUR** states, we can actually pass **TWO** bits of binary data. This is rather magnified by using finer divisions of phase-state:

0 degrees	000
45 degrees	001
90 degrees	010
135 degrees	011
180 degrees	100
225 degrees	101
270 degrees	110
315 degrees	111

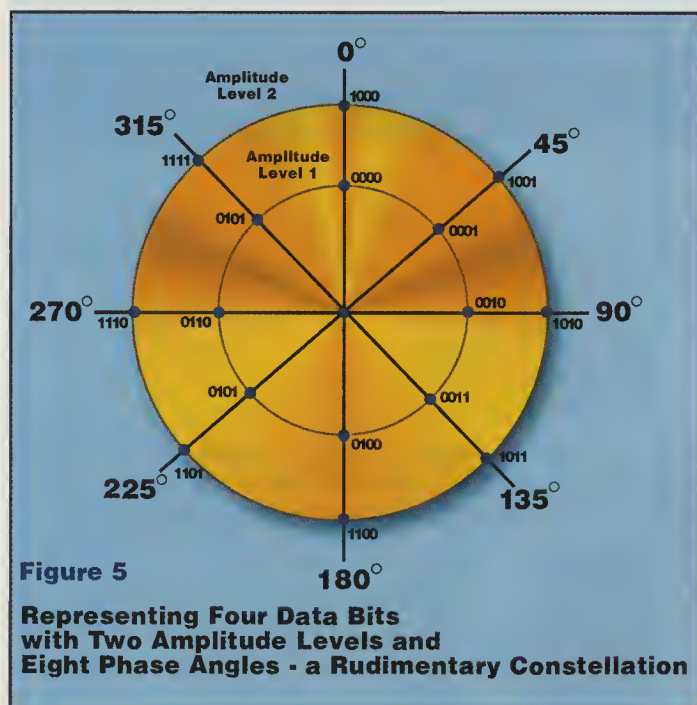
We now have 8 phase states, but we also now represent **THREE** binary bits via the transmission of a **SINGLE** phase-state symbol. A single change in phase of the sinusoidal waveform allows us to transmit three bits of data.

The other variable we can easily manipulate is the SIZE or AMPLITUDE of the waveform. Since this is attenuated in various ways by the telephone lines along the way, again during the initial training sequence between modems the two modems have to agree that a signal THIS loud is a significant amplitude level, while a signal THAT loud would be recognized as a DIFFERENT amplitude level.

The addition of amplitude allows us to increase the amount of data transmitted.

Amplitude	Phase	Binary Data
Level 1	0 degrees	0000
Level 1	45 degrees	0001
Level 1	90 degrees	0010
Level 1	135 degrees	0011
Level 1	180 degrees	0100
Level 1	225 degrees	0101
Level 1	270 degrees	0110
Level 1	315 degrees	0111
Level 2	0 degrees	1000
Level 2	45 degrees	1001
Level 2	90 degrees	1010
Level 2	135 degrees	1011
Level 2	180 degrees	1100
Level 2	225 degrees	1101
Level 2	270 degrees	1110
Level 2	315 degrees	1111

In this example, using two amplitude variations, and our 8 phase states, we can transmit 4 bits of data for each unique combination - let's call these quantization levels. For each single and instantaneous change in amplitude and phase, we can transmit FOUR bits of data. Better than the old compound interest trick, eh? Figure 5 shows a very basic CONSTELLATION using two levels of amplitude and eight phase angle states to represent four data bits with a single symbol transmission.



If we add another amplitude level, we get five bits per symbol. And if we continue to add finer phase angles, and finer amplitude levels, we can further this into ever finer quantization levels or points. And these points represent ever larger strings of binary data.

The array of symbols using various combinations of amplitude and phase, diagrammed as in figure 5, is referred to as a CONSTELLATION - it rather looks a bit like a star chart. The mission in developing higher data rates is to define ever more populated constellations. In this way, ever longer strings of binary data can be conveyed with a single instantaneous transmission of a waveform state change.

So why not just have a thousand amplitude levels and use phase states every 1/100th of a degree to get some REALLY fast data rates?

As we increase the number of symbols in the constellation, the symbols are of course closer together - in either amplitude or phase or both. They therefore become increasingly difficult to differentiate from each other on the receiving end - particularly toward the center of the constellation (low amplitudes). They also are jittered about by the vagaries of the analog line environment which has its own inductance, capacitance, noise, etc. Various ingenious means have been developed to run some test data back and forth between two modems to "train" or test the line to factor out some of these factors in the line itself - usually referred to as EQUALIZATION.

But the important part to note is that the problem of data transmission is almost entirely one of DETECTION at the receiving end. It is actually pretty easy to MODULATE a waveform that you are transmitting with a very high degree of precision. But to receive a waveform and detect whether or not it is actually at 90 degrees phase shift or an 85 degrees phase shift is much more difficult. It is similarly more difficult to detect differences in closely spaced amplitude levels from more coarsely differentiated levels.

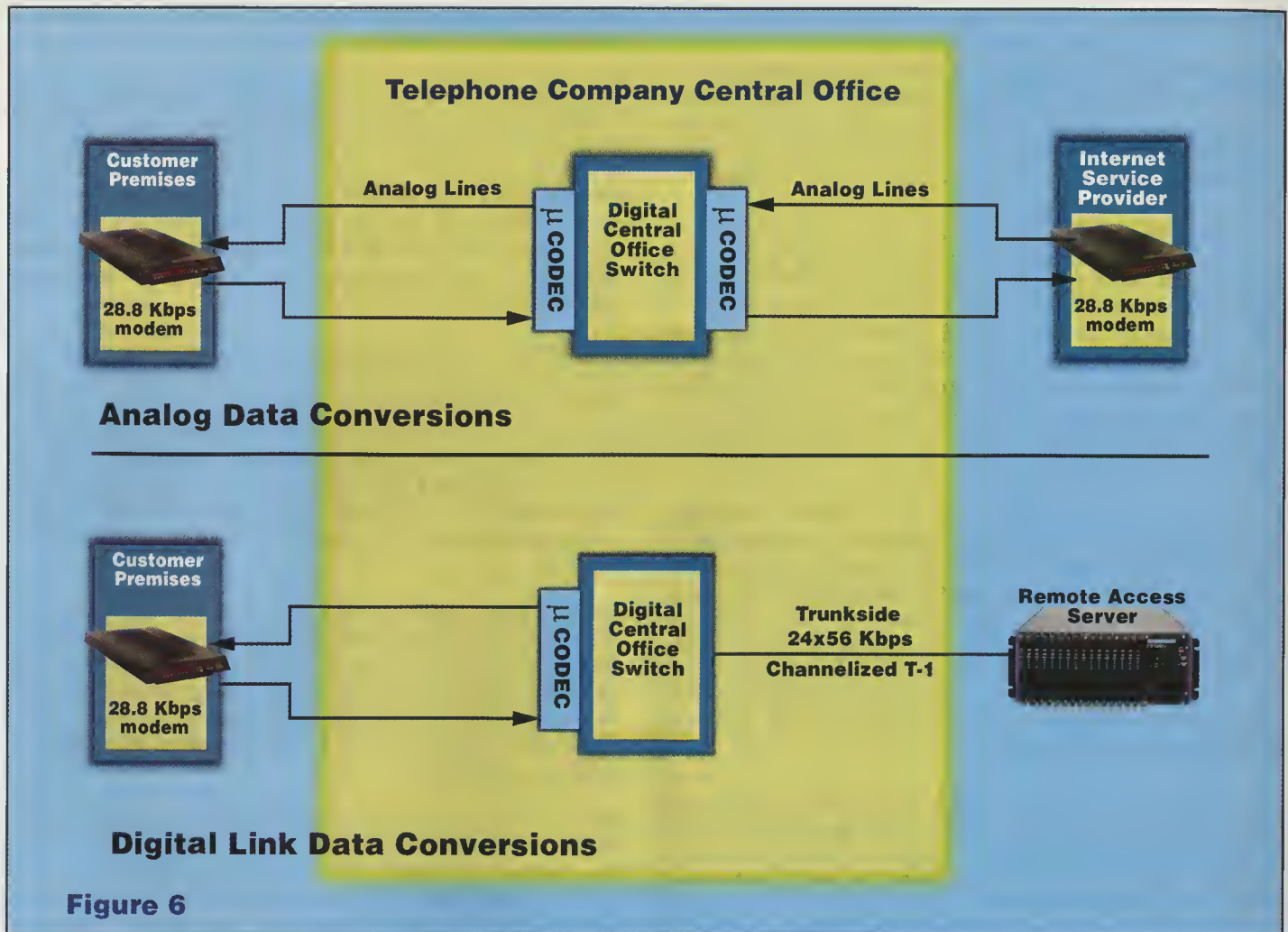
The reason I wanted to go through all of this explanation is that the real reason that 56 kbps speeds are possible is not so much that the data is being transmitted in digital form between the ISP and the telco central office. It is that in doing so we have ELIMINATED SEVERAL DIGITAL/ANALOG and ANALOG/DIGITAL conversions. These conversions tend to warp the constellation - and they are much more difficult to equalize or counter than the relatively simple problems posed by analog line characteristics.

Again note that it is much easier to convert a digital signal to a fairly precise analog waveform for transmission, than it is to analyze a received analog waveform, detect small variations in phase and amplitude, and create a digital signal from that information.

As it so happens, the telephone system has already been converted to digital technology. Almost all connections between central offices are done digitally and increasingly over fiber. Really, the only analog portion of the system in most areas is the last link from central office switch to the customer's home - as little as a few hundred feet to as high as 18,000 feet and more of 24 or 26 gauge copper. The rest of the system is a maze of 64 kbps digital channels and the telco system itself uses what could be thought of a kind of modem, a MU LAW CODEC, to do the conversions between the digital internal network and the analog local loop.

Figure 6 shows the problem. With a typical analog ISP connection, the signal from the ISP going downstream must be converted from digital to analog with a digital to analog converter in the modem. This is transmitted to the telco central





**Figure 6**

office switch over an analog local loop line. So the analog transmission is actually converted there to digital using this MU CODEC at the switch.

At the customer's local loop from the CO switch, the data is again converted from digital within the switch to analog for transmission to the end user, again using the mu codec.

The back channel works pretty much the same. Analog signals from the customers modem and local loop are received at the switch and converted to digital via a mu codec coming into the switch, then again through a mu codec back to analog for transmission via the local loop to the ISP.

The important element here is actually the mu codecs at the telco switch. These codecs use 256 non-uniformly spaced quantization levels largely unrelated to the digital to analog conversion in the data modems we know and love. They use 8 data bits to represent each of the 256 quantization points, and transmit this 8-bit data at an 8000 Hz rate for a total bandwidth of 64 kbps - note the similarity to the data rate for each channel of the T-Carrier and as it so happens, very similar to the 64 kbps data rate of each channel of ISDN.

If the modem at the ISP simply took digital data, and converted it to digital data compatible with the central office switch, and if we connect the ISP directly to the telco switch with a trunkside digital link like a 24 X56 kbps T-Carrier, or a 23B+D PRI ISDN line, we have eliminated the conversion

in the ISP modem, and HALF of the codecs at the CO switch. We've essentially moved that conversion right into the ISP equipment room where we have to do one anyway. We've also eliminated the attendant loss inherent in conversion and more pointedly, in the Analog to Digital part (the hard part) of this conversion.

Now, examine the customer side of the telco switch. In going from the switch to the local loop, DOWN to the customer, we are still performing a MU CODEC Digital to Analog conversion. Recall that we said we can convert digital signals to an analog waveform with great precision. But on the UPSTREAM side, at the telco switch we are converting an incoming analog waveform to digital data - much more difficult to do accurately.

This is why with the new 56 kbps technology, we can achieve data rates of 56 kbps, and in some cases marginally higher, DOWNSTREAM to the customer. This is really limited by the speed of the digital connection between the ISP and the CO. But we are still limited to 33.6 kbps in the back channel UPSTREAM from the customer to the ISP. And the center of all of this is NOT so much the pure clean digital signal from the ISP location to the telco switch (oh, it doesn't hurt), but rather the elimination of half of the mu codecs at the telco switch itself. And again, the digital to analog portion of the codec, downstream to the customer, is much more accurate than the analog to digital portion of the codec, coming back up.

## THE PLAYERS

After reviewing everything we've received, and noting beforehand that this concept was first published in France several years ago, it is probably my belief that the current war was touched off by a group within U.S. Robotics headed by a design engineer named Mike Flockenhaus in early spring 1996.

The last minor war for speed had involved the Rockwell Hayes V.Fast or VFC technology which beat out AT&T's 19.2 kbps V.32terbo technology to establish 28.8 kbps as the new speed standard - ultimately leading to a slightly modified version of V.FC adopted by the ITU as V.34. These are the modems we know today. Most of the modem community then adopted the Rockwell chipset as the way to implement V.34. Rockwell has been a huge winner in this area and it could easily be that 80% of the modems on the market use the Rockwell chipset. They've sold millions of them.

But there were a few renegades. U.S. Robotics, Cardinal, ZyXel, and others were very much given to the concept of using a generic Digital Signal Processor (DSP) chip to make modem magic. DSP's are somewhat generalized devices that create waveforms in response to software commands. They don't care what type of waveform you want them to make - audio, video, modem waveforms, or puddles in oatmeal for that matter. If you can connect a transducer to the output of a DSP, and program it to do what you want in software, it will make the appropriate noises on command.

The software is generally referred to as firmware - software but on a chip. But USR et al also used a Flash Read Only Memory or FlashROM chip to store the software. FlashROMs can be overwritten by new software. In this way, they could write a new modem program, download it to a PC, send it to the modem, and have the software overwrite the FlashROM - effectively upgrading the modem. There actually were some compatibility problems, correct that, there actually ARE usually some minor compatibility problems between newly designed modems, and most modem manufacturers have to more or less continually tweak the code that runs their modems. By using FlashROM and DSP's, these companies gained a great deal of flexibility in field upgrading their modems. Over several upgrades, they got the bugs worked out so that the modems would correctly interoperate with Rockwell chipset modems.

U.S. Robotics had been selling Courier modems for several years with a quite capable DSP and FlashROM. Flockenhaus et al theorized that they could take advantage of the new modem environment to kick speeds up to 56 kbps and do it all in software. The result is U.S. Robotics x2 technology for 56 kbps modems.

X2 goes a bit beyond raising the bar with regards to speed. It is a power demonstration of the advantages of DSP/FlashROM architecture over more monolithic chip sets. U.S. Robotics has not only announced 56 kbps modems, but for the few Internet Service Providers now using U.S. Robotics Total Control and NetServer products with a T-Carrier or PRI ISDN connection to the telco, the upgrade is ENTIRELY in software - at prices ranging from \$400 to \$2700 per box depending on the box. As a result, they have a few ISP's actually up and running in trials in December 1996 as this is written.

This is a bit important. The theory of 56 kbps modems is actually pretty sound. What nobody knows for sure is whether it

will actually make a difference using copper in the ground - actual links to real users.

U.S. Robotics has also announced software upgrades of any FlashROM Courier. End users that happen to have this somewhat upscale modem, or USR's ISDN modem/adaptor the IMODEM, will likely be able to upgrade the modem with a software download, ostensibly by January 15, 1997. The highest price discussed yet was \$95. Additionally, the popularly priced Sportster models sold after August 15 will be upgradeable as well. And the company has some plans to upgrade other USR models.

At COMDEX, US Robotics was demonstrating x2 pretty persuasively - though under controlled conditions. A 33.6 kbps link, using their ARQ technique to eliminate the need for start and stop bits, was passing data from a web server to a browser at a fairly impressive 3400 cps on a large and sustained file transfer in their appointment only demonstration room. Using the x2 link, it ranged from 3600-6400 characters per second and after a few seconds maintained a flat 6400 cps - very nearly doubling the speed.

The USR speed negotiation is a bit interesting. Up to 33.6 kbps they largely work as they do now. From 33.6 to about 48 kbps the speed is adjusted up or down in 4 kbps increments as line conditions allow. From 48 kbps to 61.3 kbps, this adjustment is done in 1.3 kbps increments. On T-carrier installations, 56 kbps is about all that is feasible, but on PRI ISDN connections, 61.3 kbps connections can be made.

USR can deploy their x2 technology with at least a three month, and more probably nearly a six month lead in the 56 kbps market with x2. While they haven't actually been as active a player in the ISP remote access device market as companies such as Ascend, Livingston, Cisco, or Bay Networks, they have made some inroads with larger ISP's such as AT&T Worldcom, and have recruited a fairly impressive list of some 41 ISP's that are willing to give it a try in order to use x2 to gain market share.

Cardinal Modems and Cirrus Logic have both expressed an interest in licensing U.S. Robotics technology for their modem lines.

## THE OTHER PLAYERS

Rockwell Semiconductor Systems Multimedia Communications Division in Newport Beach California has built a relatively huge business supplying chipsets to modem manufacturers in the past two years since the advent of the V.FC/V.34 modem. It is actually easier to list the modem manufacturers that DON'T use the Rockwell chipset than it is to list those that do - certainly 75-80% of all modem vendors. The company has a vested interest in keeping those modem vendors in the Rockwell fold, and U.S. Robotics x2 technology is terribly threatening.

The company released a white paper titled *56 Kbps Communications Across the Public Switched Telephone Network* on September 26, 1996 that appears to have preempted U.S. Robotics announcement of the x2 technology. They are titling their initiative **K56Plus**.

Although the two technologies are based on essentially identical assumptions, they are at this point NOT compatible. Rockwell has no intention of licensing the U.S. Robotics x2 tech-



nology, and as best we can tell, there isn't actually a Rockwell technology available yet at this writing for anyone to adopt.

But the company has done some work in gathering the forces. AT&T has historically also been a major force in the development of modem chipsets. In the last battle, they had backed the 19.2 kbps V.32terbo technology a couple of years ago. With the spinoff of the hardware arm of American Telephone and Telegraph, they are today part of Lucent Technologies. In fact, Lucent has itself been developing some remote access products for Internet Service Providers. And several vendors such as Livingston Enterprises use Lucent made DSPs with FlashROM to do 28.8 kbps and 33.6 kbps modems and Remote Access Servers. Lucent, not to be left out, has announced that they too will deploy a 56 kbps technology - titled **V.Flex2**.

With billions in modem technology sales at stake, Rockwell and Lucent, traditionally competitors, announced on November 15 that their **K56Plus** and **V.Flex2** technologies would be made to interoperate. The hope is that by quickly deploying a competing 56 kbps technology, with the overwhelming support of the majority of modem manufacturers in the world, they can beat back the assault from U.S. Robotics and avert disaster.

Lucent is claiming they can achieve higher back channel rates of nearly 45 kbps. So it is unclear how **K56Plus** and **V.Flex2** will be "compatible."

The Rockwell technology will most likely surface at the home of modem vendor Microcom. Microcom has long been one of the technological leaders in modem development. They originated one of the early error correction software techniques with their Microcom Networking Protocol or MNP. They currently are wooing the ISP community with a rackmounted remote access device they call the ISPorte. The ISPorte holds 64 modems on 16 four-port cards in a single rack. The company is working on an upgrade to 8-port cards to achieve a 128 modem capacity in a single rackmounted box.



**Microcom ISPorte Remote Access Server**

In doing so, they are hosting some 20 Rockwell engineers at their east coast facility in Norwood, Massachusetts. According to Tom VanHorn, Manager of External Marketing for Modulation Products, the new Rockwell chipset will indeed be a DSP with FlashROM capable of doing the 56 kbps trick. He is adamant that the new technology will be available early in the second quarter of 1997. And while he concedes about a one quarter lead in deployment by U.S. Robotics, notes that most of the modem world uses Rockwell chips.

The U.S. Robotics preemptive strike seems devastating. With regards to interoperability, Casey Cowell, chairman of U.S. Robotics, somewhat smugly points out that he is in a difficult position being asked to declare interoperability with a product that doesn't exist yet. According to Cowell, U.S. Robotics has a three to six month lead in deploying actual working 56 kbps equipment. And he foresees a real standard emerging from the ITU somewhere in the 18-24 month time frame. "Of course we are willing to interoperate. But at this point, no one has come to the table with anything to interoperate with."



**Casey Cowell,  
Chairman of U.S. Robotics**

#### PERFORMANCE COMPARISON

It is unlikely that there will be any core differentiation between these two technologies. Ultimately, they are based on the same premise and the limiting factor at the top end seems to be the data rate of the digital connection between the ISP and the telco switch - either 56 kbps or 64 kbps. Peripheral features in the software training sequence could cause some differences in actual operation. But no products are currently available for performance comparison and it will likely be early summer before actual head-to-head tests can be meaningfully accomplished using production product.

#### WHAT IT MEANS FOR CONSUMERS

Ultimately, the 56 kbps technology will be a boon for end-users. Deployment by Internet Service Providers is expected to be mostly a move to take market share from any nearby competitors that don't have a digital connection to the telephone network, rather than an opportunity to introduce a higher priced dial-up product. There may initially be a small premium for 56 kbps connections as they consume more of the available bandwidth to the backbone. But we generally expect most ISP's that can offer 56 kbps to offer it, and largely to use it to woo customers from nearby competitors.

That said, if your local loop connection to a digitally connected ISP doesn't render a solid 28.8 kbps connection, it is not terribly likely that you will be able to use 56 kbps successfully. The basic requirements are:

- A 56 kbps modem.

- A good local loop connection to your telco central office switch.
- A dial-up account with an ISP that offers 56 kbps.

- A match between the type of 56 kbps modem you use, (x2, K56Plus or V.Flex2) and the kind offered by the ISP. As mentioned earlier, K56Plus and V.Flex2 should interoperate on release.

Existing U.S. Robotics customers will welcome the software upgrade. New modem buyers will find U.S. Robotics modems available 3 to 6 months earlier than other models.

Long term, both U.S. Robotics modems and any based on the Rockwell chipset will likely employ FlashROM software



upgrade capabilities. So you should be able to upgrade your modem later. Expect to do so in about 18 months to two years when an ITU standard is issued. Historically, the ITU standard won't match anyone's proprietary technology precisely, so an upgrade will likely be in order no matter what comes out or what modem you buy. But do look for modems that can be upgraded through software.



**U.S. Robotics Courier V. Everything  
and Courier I-Modem**

Any Courier V. Everything or Courier I-modem can be upgraded to U.S. Robotics x2 technology. Pricing is \$95 and the company is running free upgrades for a limited time. Sportster models purchased after August 15, 1996 can be upgraded as well. U.S. Robotics will advise you of an ISP in your area supporting x2 technology at 800-525-USR1. They also maintain a list of ISP's on their web site at <http://x2.usr.com/leaders/index.html>. As of the middle of December, they had over 80 ISP's in the United States signed up.

#### WHAT IT MEANS FOR INTERNET SERVICE PROVIDERS

For Internet Service Providers, the stakes are a bit higher. We would see a serious shift in market share among customers

from ISP's that don't offer 56 kbps connections to those that do. Early comments by Internet Service Providers seem to be lukewarm to the development, but we think customer pressure will be sudden, early, and intense.

The result will certainly be a move toward the necessary T-carrier or PRI ISDN connections to the telco central office switch. For those without it, this can be a fairly expensive upgrade and can take six to eight weeks to have installed in any event. We would look for some smaller ISP's operating on marginal cash flows to throw in the towel, initially decreasing the number of ISP's slightly perhaps by a couple of hundred smaller ISP's. The resulting windfall for larger ISP's will enhance their profitability and ability to make this technology transition, and make the move to 56 kbps look slightly better than it probably should have been.

Many ISP's are already equipped with digital connections, but are heavily invested in remote access products from Ascend, Cisco, Livingston, Bay Networks, or other vendors. Those already expanding rapidly may hedge their bets with additional U.S. Robotics remote access products, and upgrade their existing devices when upgrade cards become available from the current vendors. Others will have to wait for product release from their current vendor. That could be a tough rock on which to perch if the Rockwell/Lucent initiative doesn't show up before the customers start screaming.

It comes as no surprise that as any industry matures, the financial cost of entry rises. The dependence of 56 kbps technology on digital trunks to the CO will cause many ISP's who currently use modems and analog lines to take a close look at putting in some digital connections and dabbling in Remote Access Servers. Currently, many of these ISP's face a peculiar problem. They have a roomful of modems, terminal adapters, and analog lines. They've grown faster and further than they dared quite hope when they started. And they're vaguely uncomfortable that with continued growth, the roomful of horrors isn't quite the direction they should be moving.

But to convert 80, 100, or even 200 lines to the neater, and much more manageable Remote Access Server design has

## REMOTE ACCESS SERVERS

COMPANY	PRODUCT	PORTS	T-1s	COST LOADED	PER PORT	RELIGIOUS AFFILIATION	TELEPHONE
Ascend Communications	MAX4004	96	4	\$55,000	\$572.92	K56Plus	(415)688-4342
Ascend Communications	MAX TNT	672	28	\$435,050	647.39	K56Plus	(415)688-4342
Bay Networks	Remote Annex 6100	24	1	\$24,995	\$1041.45	V.Flex2	(508)670-8888
Cascade	AX1600	672	24	\$385,000	\$572.91	K56Plus	(508)692-2600
Cascade	AX800	240	16	\$178,250	\$742.70	K56Plus	(508)692-2600
Cisco Systems	AS5200	48	2	\$37,500	\$781.25	K56Plus	(408)526-7209
Hayes Microcomputer Products	Century 9400	64	3	\$49,000	\$765.63	V.Flex2	(770)441-1617
Livingston Technologies	Portmaster 3	48	2	\$30,600	\$637.50	V.Flex2	(510)426-0770
Microcom	ISPorte	96	4	\$42,646	\$444.23	K56Plus	(617)551-1000
Mutitech	CommPlete Communications Server	48	2	\$39,000	\$812.50	V.Flex2	(612)785-3500
Netrix	micro.pop 2330	192	8	\$133,500	\$695.31	K56Plus	(703)793-2119
Shiva	LanRover Access Switch	48	2	\$46,300	\$964.58	K56Plus	(508)788-3061
U.S. Robotics	Total Control Network Hub	48	2	\$44,126	\$919.29	x2	(847)470-2010
U.S. Robotics	NETServer 16	16	8 BRI	\$13,955	\$872.19	x2	(847)470-2010





# TRUNKSIDE DIGITAL CONNECTION AVAILABILITY IN 50 STATES

STATE	COMPANY	CONTACT	PRODUCT	INSTALLATION	MONTHLY	PER PORT
Alabama	Bellsouth	local office	PATHLINK	\$1,100.00	\$2,070.00	\$86.25
Alaska	ATU Telecom	907-565-4736	ISDN Primary Rate	no tariff		
Arizona	US West	800-246-5226	ISDN Primary Rate	\$3,972.00	\$2,160.00	\$93.91
Arkansas	Southwestern Bell	local office	SmartTrunk	\$2,000.00	\$1,622.58	\$67.61
California	Pacific Bell	800-472-4736	FasTrak Primary Rate ISDN	\$750.00	\$220.00	\$9.57
Colorado	US West	800-246-5226	ISDN Primary Rate	\$3,512.00	\$2,179.00	\$94.74
Connecticut	Nynex	212-390-9342	ISDN Primary Service	\$1,375.00	\$945.48	\$41.11
Delaware	Bell Atlantic	800-570-4736	ISDN IntelliLinQ	\$699.30	\$704.55	\$30.63
DC	Bell Atlantic	800-570-4736	ISDN IntelliLinQ	\$700.00	\$450.00	\$19.57
Florida	Bellsouth	local office	PATHLINK	\$1,100.00	\$1,670.00	\$69.58
Georgia	Bellsouth	local office	PATHLINK	\$1,100.00	\$2,370.00	\$98.75
Hawaii				no tariff		
Idaho	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,465.00	\$1,158.00	\$48.25
Illinois	Ameritech	800-832-6328	ISDN Prime	\$2,575.00	\$599.85	\$26.08
Indiana	Ameritech	800-832-6328	ISDN Prime	\$3,900.00	\$710.00	\$30.87
Iowa	US West	800-246-5226	ISDN Primary Rate	\$2,850.00	\$1,702.00	\$74.00
Kansas	Southwestern Bell	local office	SmartTrunk	\$1,700.00	\$1,490.00	\$62.08
Kentucky	Bellsouth	local office	PATHLINK	\$1,100.00	\$2,070.00	\$86.25
Louisiana	Bellsouth	local office	PATHLINK	\$1,100.00	\$2,075.00	\$86.46
Maine	Nynex	212-390-9342	ISDN Primary Service	\$1,642.00	\$1,044.50	\$45.41
Maryland	Bell Atlantic	800-570-4736	ISDN IntelliLinQ	\$700.00	\$500.00	\$21.74
Massachusetts	Nynex	212-390-9342	ISDN Primary Service	\$1,697.38	\$685.00	\$29.78
Michigan	Ameritech	800-832-6328	ISDN Prime	\$2,450.00	\$599.85	\$26.08
Minnesota	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,535.00	\$1,158.00	\$48.25
Mississippi	Bellsouth	local office	PATHLINK	\$1,100.00	\$2,075.00	\$86.46
Missouri	Southwestern Bell	local office	SmartTrunk	\$3,540.00	\$1,812.95	\$75.54
Montana	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,365.00	\$1,158.00	\$48.25
Nebraska	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,465.00	\$1,158.00	\$48.25
Nevada	Nevada Bell	702-688-7124	ISDN Primary Service	\$1,250.00	\$400.00	\$17.39
New Hampshire	Nynex	212-390-9342	ISDN Primary Service	\$1,626.76	\$917.40	\$39.89
New Jersey	Bell Atlantic	800-570-4736	ISDN IntelliLinQ	\$700.00	\$450.00	\$19.57
New Mexico	US West			No tariff		
New York	Nynex	212-390-9342	ISDN Primary Service	\$1,375.00	\$945.48	\$41.11
North Carolina	Bellsouth	local office	PATHLINK	\$1,100.00	\$2,070.00	\$86.25
North Dakota	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,465.00	\$1,158.00	\$48.25
Ohio	Ameritech	800-832-6328	ISDN Prime	\$2,450.00	\$599.85	\$26.08
Oklahoma	Southwestern Bell	local office	SmartTrunk	\$1,900.00	\$1,392.45	\$58.02
Oregon	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,265.00	\$1,158.00	\$48.25
Pennsylvania	Bell Atlantic	800-570-4736	ISDN IntelliLinQ	\$700.00	\$500.00	\$21.74
Rhode Island	Nynex	212-390-9342	ISDN Primary Service	\$1,616.10	\$951.75	\$41.38
South Carolina	Bellsouth	local office	PATHLINK	\$1,100.00	\$2,170.00	\$90.42
South Dakota	US West			No Tariff		
Tennessee	Bellsouth	local office	PATHLINK	\$1,100.00	\$1,860.00	\$77.50
Texas	Southwestern Bell	local office	SmartTrunk	\$4,615.00	\$1,099.15	\$45.80
Utah	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,365.00	\$1,358.00	\$56.58
Vermont	Nynex	212-390-9342	ISDN Primary Service	\$1,729.00	\$1,089.00	\$47.35
Virginia	Bell Atlantic	800-570-4736	ISDN IntelliLinQ	\$700.00	\$450.00	\$19.57
Washington	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,335.00	\$1,158.00	\$48.25
West Virginia	Bell Atlantic	800-570-4736	ISDN IntelliLinQ	\$700.00	\$800.00	\$34.78
Wisconsin	Ameritech	800-832-6328	ISDN Prime	\$3,350.00	\$675.00	\$29.35
Wyoming	US West	800-246-5226	ISDN Primary Rate - 24B DATA ONLY	\$3,465.00	\$1,158.00	\$48.25
<b>National Average</b>				<b>\$2,117.38</b>	<b>\$1,233.64</b>	<b>\$52.20</b>



**U.S. Robotics MP/8 I-Modem and MP/16 I-Modem**

some problems. First, the digital lines don't go in overnight. In some areas it can take 6 to 8 weeks for the telco to get one to the site and get it operational. Second, the roomful of modems is paid for already. Wiping it out with a nice little rackmount unit costs some serious ducats. The accompanying table lists some of the top makers of Remote Access Servers, the title of their popular product, the number of ports it will service, and an approximate cost configured for the maximum ports. It also lists their religious affiliation vis a vis Rockwell K56Plus, Lucent V.Flex2, and U.S. Robotics x2 for the coming 56 kbps battle. A cost of **\$500 to \$1000** per port is not only higher than most ISP's pay for modems, but they are paying it to replace already paid-for modems.

Further, the telephone lines cost more. Analog business lines typically average around **\$30** per month. But since these lines don't need long distance, and in fact don't EVER make an out-bound call, a number of ISP's have found deals on historical tariffs for inbound only lines for as little as **\$20** per month per line. The accompanying table roughly lists digital trunk service offerings across the fifty states and illustrates the absolutely hysterical pricing extant across the current telco landscape. PacBell customers in California can find Primary Rate ISDN with a monthly charge as low as **\$220 (\$9.57** per channel) but they get to pay per-minute rates along with it. Similarly Nevada Bell is **\$400** per month or **\$17.39** per port. But flat rate service, is much higher and the peak seems to be BellSouth in Georgia at **\$2300** per month or **\$98.75** per port. The national average would seem to incur an initial installation charge of **\$2117.38** and a monthly charge of **\$1233.64** or **\$52.20** per port. In almost all cases that would be higher than the regular POTS analog lines. So ISP enthusiasm may well be mapped by where flat rate channelized T-1 and Primary Rate ISDN is available at a reasonable cost. How national ISP's with POPS all over the country deal with this is anybody's guess. But it has to be a nightmare.

Note that there is an additional constraint. The digital connection must be what is referred to as a TRUNK SIDE connection as opposed to a LINE SIDE connection. All PRI ISDN and BRI ISDN connections are trunk side, and channelized T-Carrier connections are USUALLY, but not always, trunk side.

Currently, if an ISP does wipe out their roomful of horrors, invests **\$40-\$50,000** in a Remote Access Server, and puts in a pair of channelized T-1 lines or PRI ISDN trunks, when they get done, they have the satisfaction of having a gorgeous,

state-of-the-art installation that is much more manageable and poises them for continued growth without grinding to a halt technically. But to the outside world, ie their customers, there is no positive change. They look like they had precisely what they already had. In fact, if not done carefully it can cause some serious disruptions of service.

So there are probably an extraordinary number of ISP's sitting on a wiring fiasco that grows each week as they continue to add lines, but continue to be very hesitant to clean it up. But 56 kbps may well push a lot of them over the edge. If 56 kbps IS sufficiently important to customers to cause them to switch ISP's, it will be the first excuse to actually make the jump to the Remote Access Server configuration, and the first time it allows them to actually offer something new to their customers in the process.

We think a large number of ISP's will hem and haw about how 56 kbps is unproven, how they plan to wait on standards, and so forth right up until the week where for three days either their phone is ringing off the hook with customers wanting the 56 kbps connection, or alternately for the three days where their phone doesn't ring at all. Either event will bring a sudden and sincere enthusiasm for 56 kbps technology, and remote access server architecture.

## STRATEGIES FOR SMALL ISP'S

U.S. Robotics currently sports about a 38% market share in desktop modems - largely due to the popularly priced Sportster series. And their Courier V.Everything and I-modem modems are actually pretty popular among ISP's using analog lines or individual BRI ISDN lines.

While we've talked a good bit about the high end of the market, U.S. Robotics has actually done pretty well for the smaller ISP's - in those areas where ISDN is available. They have A NETServer 8/16 I-modem box that can service up to eight Basic Rate Interface ISDN pairs. This allows up to eight 128 kbps ISDN calls, sixteen 64 kbps ISDN calls, or sixteen 56 kbps x2 analog calls, or various combinations of the same, from a single box. So ISP's in an area with ISDN, can get the necessary trunk-side digital connection through the less expensive Basic Rate Interface ISDN. Here in US West Land, a 2B+D BRI ISDN line is about **\$400** to install, and **\$68** per month - but it is, for the purposes of x2 56 kbps analog callers, the equivalent of TWO analog lines. That's not terribly punishing. Pricing for a fully loaded NETServer 8/16 I-modem loaded is **\$13,995**. So for a hardware cost of **\$13,995**, an ISDN installation cost of **\$3200.00**, and a monthly recurring cost of **\$544**, you can have sixteen x2 lines up and ready.

As an interesting little wrinkle in all of this, there is an even smaller play vis a vis U.S. Robotics after all. If you have their ISDN IMODEM at the ISP end, and it is connected to the telco central office switch with a BASIC RATE ISDN line (2B+D), they can upgrade the IMODEM to x2 and offer 56 kbps to their customers while still keeping the individual modems/dumb terminal architecture. The 2B+D ISDN actually IS a digital connection to the central office, and 56 kbps will work just fine. And it is true that an analog modem customer can dial an ISDN telephone number with one of these IMODEMS on it, and make a connection. So it actually IS possible to put up a handful of lines with relatively low cost individual USR modems, and do a LITTLE BIT of 56 kbps, relatively inexpensively. It is not unthinkable then, for a 32 line analog ISP, to put in six BRI ISDN lines at **\$30** to **\$70** per month each, hang a U.S. Robotics IMODEM on each of



the six, and have 56 kbps available to their customers within a few days. If the six lines are on a separate hunt group, they could then advertise 56 kbps availability and in fact, be able to deliver it on a small scale. Remember where you read it first.

### THE US ROBOTICS UPGRADE STRATEGY

U.S. Robotics is playing their FlashROM ace pretty hard. ISP's with Total Control Enterprise NETServers of either the PRI ISDN or T-1 flavors can upgrade the equipment totally with a software upgrade available in January at a cost of \$2750.

A NETServer 16 I-modem box is also totally upgradeable in software at \$995.

Courier V. Everything and Courier I-modem upgrades - again software are \$95.

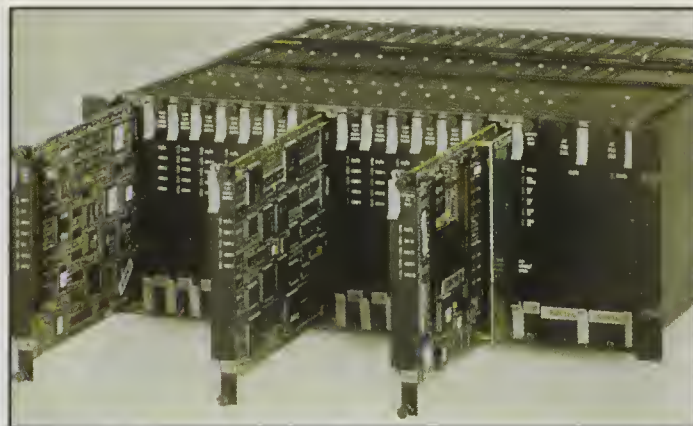
Sportster modems purchased August 15 or later ARE upgradeable as well.

But during December, U.S. Robotics did have a deal that was hard to resist. EVERYTHING WAS FREE. As of this writing, the free period is scheduled to end December 31 for most products, and January 4 for Sportsters. But with U.S. Robotics apparently staking out a burn, pillage, and plunder strategy in getting x2 out as the dominant technology, we're unclear how firm the December 31, 1996 date is.

U.S. Robotics also has a program titled x2Xtreme Advantage. This is essentially a co-marketing program for Internet Service Providers where they list ISP's on their web page and offer other marketing incentives to get on the x2 ship. More information is available on their web site at <http://www.usr.com>.

### HOW WILL IT ALL SHAKEOUT?

There are a couple of items influencing the eventual outcome. The initial question is whether or not 56 kbps will work with real copper in the ground. To date, most all the demonstrations have been with copper reaching almost all the way across the room. If you put six or eight thousand feet of wire in the equation, will it still work?



**U.S. Robotics Total Control PRI Access System**

Our sense is that it will, but only in some areas. If you are dialing into a local CO, that happens to be the same CO your ISP is connected to digitally, and you are in Scottsdale Arizona where the entire urban area is less than 10 years old, happy web surfing. If you are in New York city trying to make connections over wires laid in the 1920's or earlier, you've never seen a 28.8 kbps connection anyway, so why get excited about all the Arizonians that are basking in the joys of 56 kbps.

As to standards, it matters much less than it would at first appear. The real battle led by U.S. Robotics and a few others, and I would say now officially won, is the DSP/FlashROM architecture. I would not look for ANY new product from ANY vendor to NOT use this architecture for whatever they come out with. It absolutely IS the new model for Rockwell's K56Plus, as well as Lucent's V.Flex2. It would pay to ask, but I don't think you'll find any new products that have 56 kbps that don't use this FlashROM upgrade capability.

So ultimately, we will have a huge heated battle for a year or so, at the end of which EVERYONE will have to upgrade anyway. It would be almost unheard of for the International Telecommunications Union to issue a standard that was totally compatible with any one vendor's proprietary product. So it is almost inevitable that EVERYONE, both the winners and the losers

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**U.S. Robotics Total Control T-1 Chassis With Card**

however it comes out in the marketplace, are facing a SOFTWARE upgrade to their modem iron.

So the key to the selection process is to ally with vendors that have in the past "taken care of" their customers with low cost upgrades and good customer service and that will commit now to doing so in this instance.

In the battle itself, we look for U.S. Robotics, who currently has a minority share of the Internet Service Provider market now (that is for Remote Access Products such as their Total Control system - they're quite strong with ISP's as an analog modem vendor) to gain considerable attention and significant gains in market share for their Remote Access Server products. Currently, it looks like Ascend Communications and Livingston Enterprises are terrifyingly dominant in this arena among Internet Service Providers. Ascend's Max4004 allows ISP's to not only handle digital trunks, but almost any combination of incoming ISDN and analog calls, and it will even handle the T-1 out to the Internet backbone. It's the closest thing to an ISP in a box on a large scale that there is. And Ascend is moving ahead with Digital Subscriber Line options to allow data rates of up to 6 Megabits per second to the home over existing copper - with upgrade cards specifically for the MAX 4004.

The Livingston Portmaster3 is nearly as flexible, and sports one of the lowest per-port costs in the industry. And Livingston has already announced a nearly free upgrade to the Lucent V.Flex2 version

and ultimately to the ITU version released. There are so many ISP's operating analog lines with Livingston's dumb terminal Portmasters now, that the upgrade to a Portmaster 3 starts to look like a fait accompli. X2 is U.S. Robotics's play to get their Total Control system in the equipment rooms of rank and file Internet Service Providers against these two. It will probably work to some degree.

But it also looks like almost all Remote Access Server vendors will gain. The battle is undoubtedly going to cause a larger degree of awareness among the smaller ISP's, and a large series of purchases by the larger ones. It might be that all the vendors enjoy the pain of a couple of quarters of emotional distress, until the sales numbers come in. At which point, several if not all of them will be very happy campers.

The strategies are that U.S. Robotics is earliest and has it now. They have also already signed up a number of Internet Service Providers including CompuServe, AOL, Prodigy, IBM Global Network, and MCI. In a master stroke, they have flanked the entire industry with one of the most beautifully executed moves we've ever seen.

Rockwell/Lucent are replying that have joined forces, and together sport the biggest and the most modem vendors, all arrayed in unison against the U.S. Robotics evil empire. They really can bury U.S. Robotics with a pileup of the vendor bodies. Frankly, that's pretty persuasive too. More so if they really do squirt working products EARLY in the second quarter. We find that somewhat unlikely.

For the ISP community, we do look for a shakeout. We would predict something on the order of 150-200 smaller ISP's will simply throw in the towel. And the main beneficiaries will probably be medium sized ISP's with 2000-10000 customers that have been competing in ferociously competitive markets, have made or will make the digital trip, and will be able to feel the benefit of absorbing the 500 or 1500 customers of the truly marginal small fry surrounding them that give up and go home.

But do not be surprised to find some ISP's with a scant 250 customers coming out as the FIRST to deploy this technology. Where some see disaster, others see opportunity. It is actually much easier to roll 32 lines to an upgraded world of new hardware, than it is for UUNET or PacificBell or AT&T WorldNet to convert thousands of POPs they just installed to a new world. This is actually the hole-card smaller companies can play in a world of elephants. We would not be surprised to see some of the guerrilla operations connecting customers by the time you read this article in our January 1997 issue.

Our Quarterly Directory of Internet Service Providers has been rather a hit on the newsstand. As a result, we'll be going bi-monthly with the now so called March/April issue. One of the new items we will be listing is a 56 KBPS column indicating whether or not each ISP offers a 56 kbps connection, and if so, at what monthly price. But it will also list whether they support x2, K56Plus, or V.Flex2 flavors. In this way, we hope to "keep score" by serving as a tally sheet to try to give our readers an early view of what becomes the prevalent interim technology over the next 18 months to two years. ♦



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# CYBERWORLD MONITOR

Frank X. Sowa

## NEW COPYRIGHT LAWS BAD NEWS FOR ALL INTERNAUTS

Frank X. Sowa is president of The Xavier Group, an international consultancy providing strategic planning, forecasting, training, and development of business and communications systems for organizations since 1981. As a certified software consultant for Softarc's First Class, and a reseller for other companies, he configures customized BBS systems for organizations, complete with "regular content updates." Sowa is also founder and sysop of SEED.NET (412) 487-5449, "the online incubator" for small businesses, a seamless BBS-to-Internet (PPP) provider, with business start-up assistance and seed capital available online.  
mailto:franksowa@aol.com

The United States — as the world's last superpower — basically can tell the world government what to do, and though there are arguments the UN and other world bodies eventually come around to seeing things from the U.S. perspective. This has held especially true during all of the recent trade and military negotiations and in discussions about the future of the Internet — where U.S. muscle clearly dominates. But the current Administration often claims it must "compromise" with international interests to avoid blame for advocating policies that are unpopular at home.

Take Copyright Infringement. Since 1991, The Clinton Administration has been working on the National Information Infrastructure Initiative (NII) and concomitantly on the Global Information Infrastructure Initiative (GII) — global controls for the Internet via GATT, NAFTA, and other international agreements. Both of these projects are directed by the U.S. Department of Commerce.

### ISPs FACE MORE GOVERNMENT HARRASSMENT

Commissioner of Patents Bruce Lehman has been pushing what is called the "digital agenda" for the NII and GII. It would totally rewrite U. S. copyright laws and create a "transmission" right that would give injured parties injunctive relief against all "electronic agents" who have — knowingly or not — transmitted copyrighted materials until the courts can decide who is at fault.

The new "transmission" right proposal allows for the seizure of all digital and computer equipment by the courts during this injunction period and permits "appropriate" legal authorities to hack into a suspected system to extract the materials allegedly in violation. If the perpetrators and the transmission operator are found in violation of copyright, they face stiff sentences, jail time, and the destruction or sale of all of their equipment. (Look out America Online!)

The standard of culpability has also been lowered in Lehman's proposal, vastly expanding online service providers' exposure to legal and civil liabilities. Current law requires proof that one knowingly infringed upon the copyright of another, or knowingly aided such infringement. The new proposals include those who "know or should have known" that they were infringing copyright, or that their online facilities were being used to infringe copyright.

In 1995, Senators Orin Hatch and Patrick Leahy took Commissioner Lehman's proposals to Congress in the form of Bills **S. 1284** and **H.R. 3531**. Multibillion-dollar copyright-based industries such as movie studios, software companies and music producers who were battling to keep the high-tech information age from eroding their profits strongly supported these bills.

But ISPs and other Internet-based industries lobbied heavily and the bills were defeated over the summer. However, that did not end the threat to online communities — including end users.

### END USERS ALSO LIABLE FOR CASUAL VIOLATIONS

Even if you don't run an ISP business or Web site, this is your battle too! One of the Lehman proposals would make "temporary reproduction" of protected material a crime unless one had the prior permission of the copyright holder. A Web browser necessarily makes a digital copy of every page before it's displayed to you; how are you to obtain "prior permission" from an unknown author?

### WHAT FAILED IN CONGRESS MOVES TO U. N.

The Clinton Administration has moved discussion of "transmission rights" to the world platform, under the auspices of a UN Working Group. If enacted, the same proposals that failed muster in Congress will be imposed upon U. S. citizens anyway — and the rest of the world.

In December, officials from 120 countries got to work on the first overhaul of international copyright laws in 25 years, incorporating all of the clauses initially proposed by the Clinton Administration. The three-week conference was organized by the **World Intellectual Property Organization** (WIPO), a United Nations agency that coordinates international patents, trademarks and copyrights.

### WHAT'S WIPO?

WIPO acts as the secretariat for the major intellectual property conventions (international agreements), including the Berne Convention, Brussels Convention, Geneva Convention, and Rome Convention. The WIPO's mandate is to:

- act as a catalyst for updating copyright arrangements
- monitor events relevant to copyright



- provide technical assistance and information on copyright issues
- facilitate cooperation among international and regional agencies with responsibility for intellectual property
- assist developing countries to develop creative resources and to gain access to the intellectual property of developed countries on more favorable terms

In this case, WIPO appears to be acting as an agent of individuals in the United States government who don't believe that Congress is the last vehicle for creating U.S. laws that affect the welfare of the U.S. citizenry. Having gotten nowhere with Congress, they have moved everything to the world stage where these globalists are getting the controlled results they demand.

For several years now, WIPO has been working on a project referred to as the "Berne Protocol" — which includes clauses for Lehman's digital agenda (transmission rights), and separate provisions for electronic database protection (raw data). These two expansions of the International Copyright Laws have a chilling effect on the domestic scene without any debate or oversight on Capitol Hill.

Those who argue for the Berne Protocol argue that "Copyright laws based on national boundaries have been made irrelevant by the fast, borderless world of the Internet, where anything from music to software can be duplicated and distributed at the click of a computer mouse."

The diplomats and industry officials who support the new laws claim that the world economy is losing between \$4 and \$50 billion each year to intentional and unintentional copyright theft via the Internet, and that this abuse of copyright must be controlled if copyright is to have any meaning in the 21st Century.

The WIPO Convention was meeting in Berne the week I wrote this. Delegates were expected to pass three new treaties which supported Lehman's view and policies — to protect literary and artistic works, the rights of performers and producers of music, and producers of databases.

Critics of the draft laws, including consumer groups and a coalition of U.S. online and Internet service providers, were brushed off when they complained that the new copyright laws would stifle the growth of the Internet. Their arguments that this protocol would clog public access, retard growth of the global computer network and jeopardize the future of electronic communication and commerce fell on deaf ears.

### NEW LIABILITIES FOR ISPs

According to the protocol draft finally agreed upon, online providers are required to block availability and remove the infringing material. In other words, ISPs and BBSs must play policeman and monitor what they publish or be held financially and criminally liable for copyright infringements.

Online service providers must also develop a means to collect transmission royalties on all copyright-protected materials that pass through their services.

The enforcement issue will also be a boon to new job growth within the world's governments, who will need a rather large and skilled Internet force of military and police to go after the culprits of unlicensed distribution of copyrighted work. Again, it becomes obvious that the ISPs will be the most likely targets because they will be easiest to locate and prosecute.

## GLOBAL TREATY WOULD BIND CONGRESS

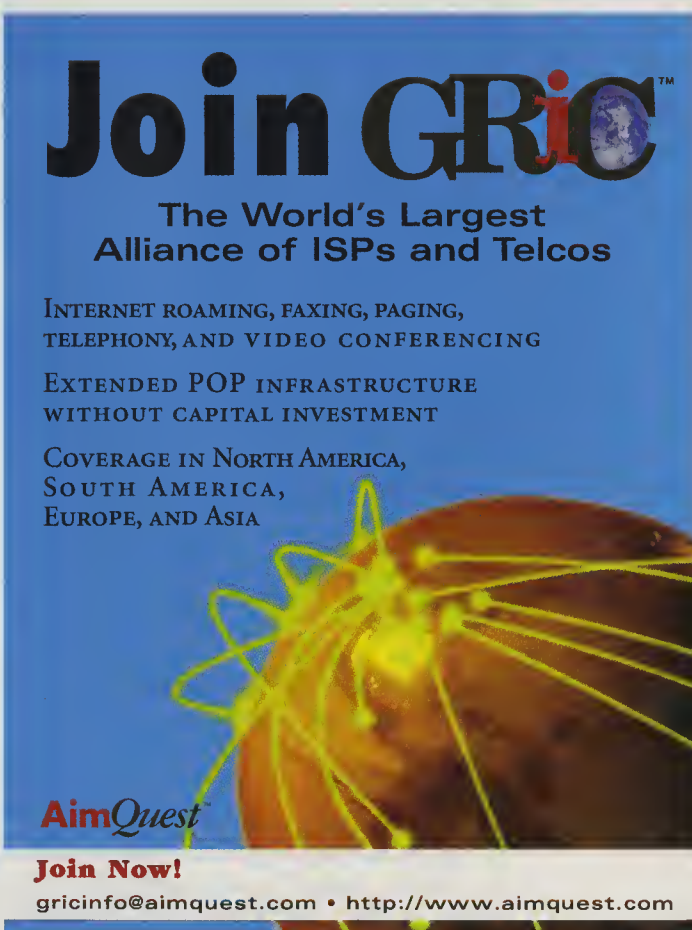
The Berne Protocol, if it becomes part of a binding international treaty, would forever constrain Congressional action on copyright matters within U. S. borders. Furthermore, the U. S. would be obliged to assist enforcement actions against alleged infringers in other, non-signatory countries.

## LAST CALL TO STOP INFRINGEMENT OF OUR RIGHTS

The Lehman proposal, embodied in WIPO's Berne Protocol, would tip the scale of justice much too far in the direction of intellectual property owners. It would have a chilling effect on both the provision and use of online services of every kind.

Passage of the treaty containing these provisions is probably unavoidable by the time you read this. But such a treaty would still face a ratification vote in the U. S. Senate before it would be binding upon citizens of this country. If ratification fails in the U. S., the treaty is unlikely to be ratified in much of the rest of the world.

Read US PTO Commissioner Lehman's comments on copyright law at <http://www.uspto.gov/web/menu/menu5.html> to learn more about the "digital agenda." Bone up on the proceedings of WIPO's "Diplomatic Conference on Certain Copyright and Neighboring Rights Questions" conference at <http://www.wipo.org/eng/diplconf> and write to your U. S. Senator (see <http://www.senate.gov> to look them up). Help stop this treaty right here where it originated, or be very afraid to load another Web page in your browser. ♦



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# Webscript OF THE MONTH

## NEW YEAR, NEW DIRECTION

We're expanding the scope of this column to include freely available scripts written in languages other than JavaScript, i. e., VBScript, PERL, etc. The real focus of our column remains the same: providing useful, tested scripts you can plug into your own Web site; hence the term "webscript." Also beginning this month, we will provide our Webscript of the Month with commentary via listserve or at our web site. Our column will focus on tips, questions, reviews, and tools for WebMasters.

## THE MAIL BAG

Let's begin the year by answering some of your questions. The following mail has been edited for an audience of mixed sensibilities and maturity.

*I would like to add some Java applets to my website. How do I do this? It works like JavaScript, right?*

J.D.

Dear J.D.:

Let's first make it clear that Java and JavaScript aren't just different animals, they come from different kingdoms — or at least phyla. Java is a full fledged, compiled programming language. Java programs called *applets* are downloaded to your browser from the web server and then executed on the client. Our column is about JavaScript, a non-compiled scripting language that is embedded within conventional HTML documents. But a few words about plug-n-play Java applets are in order.

The first step is to copy your Java applet to the directory containing your web pages. The applet program will be named using the **.class** extension. If you have problems with this step, check with your provider or system administrator for help.

The server delivers applets to your user's browsers when prompted by the **<APPLET></APPLET>** tag pair. The basic tag convention is:

**<APPLET code="className" WIDTH = W Height = h></APPLET>**

The width and height attributes establish the size for the applet display area. Additional parameters include **ALIGN**, **HSPACE** & **VSPACE**, and **CODE BASE**. Use **CODEBASE** to specify the path to your

Java applet if it doesn't reside in the same directory as your html documents.

The **<PARAM>** tag allows you to customize many Java applets. **<PARAM>** tags must appear between the **<APPLET>** and **</APPLET>** tags. For example:

**<APPLET CODE=AppletSubclass.class  
WIDTH=anInt HEIGHT=anInt>**

**<PARAM NAME=parameter1Name VALUE=aValue>**

**<PARAM NAME=parameter2Name  
VALUE=anotherValue>**

Your browser can not interpret Java applets!

**</applet>**

Text between the **<APPLET></APPLET>** pair is interpreted and displayed by browsers that CAN'T handle Java applets. Include a line such as, "Your browser can not interpret Java applets" to notify users that they can't see the applet.

Be sure to thoroughly test your applications, since poorly written Java applets can cause memory leaks or otherwise adversely affect client performance. Unfortunately, I re-learned this lesson recently when Netscape Navigator users reported that their systems were crashing when visiting my site. We tracked the problem to a misbehaving banner rotator. Every time the applet wiped the banner, it would create a new thread without releasing the previous. Eventually, the Java applet sucked all the available resources and crashed the client computer. Microsoft Internet Explorer handled the errant application without difficulty.

Visit <http://home.netscape.com/eng/mozilla/Gold/handbook/javascript> for more insight on the differences between Java and JavaScript. If you want to write Java programs, download the developer's kit from <http://java.sun.com/nav/download>. **JavaWorld** is an excellent online resource at <http://www.javaworld.com> and so is **Gamelan** at <http://www.gamelan.com>.

## ARE WE UNFAIR TO MICROSOFT?

Bob Welland, Microsoft Corporation, Development Manager for ActiveX Scripting, wrote:

*"I believe that you are doing your readers a disservice in suggesting that Internet Explorer 3.0 has such a poor quality JavaScript implementation that it might as well be disabled... This is clearly false. In fact, Internet Explorer 3.0 has a high degree of compatibility and most of your readers will not encounter problems. I find it peculiar that you suggest work arounds for Navigator 2.0 and Navigator 3.0 incompatibilities yet you offhandedly dismiss Internet Explorer 3.0. There are a very large number, many hundreds, of existing JavaScript enabled pages that work flawlessly on both Navigator 3.0 and Internet Explorer 3.0."*

I agree with Bob that IE 3.0 works with a few hundred programs. But in my experience there are just as many, if not more, that work with Netscape Navigator but don't work with Internet Explorer. Navigate to

Steve Graves is founder of Technical News Service Inc. and Editor of **SysNews.Com - The Journal of Online Products and Services** (<http://www.sysnews.com>). Each issue, Steve spotlights a unique, practical, cool or otherwise noteworthy JavaScript application, which must be freely available for use by other Webmasters. If you have written or know of such a script, write to Steve at <mailto:editor@sysnews.com>. All reviewed scripts can be retrieved at <http://www.sysnews.com/centers/java/java.htm> where Steve also maintains a conference area for questions and comments about JavaScript. You can also subscribe to his JavaScript mailing list at this page.



our JavaScript resource center at <http://www.sysnews.com/webscripts/java.htm> and select the new *Cut n Paste JavaScript* section. You'll find over 100 JavaScripts. Test them with Internet Explorer and Netscape. Do you want to bet your next paycheck over which product best supports JavaScript?

In all fairness, I must admit that the latest Netscape 3.0 builds are better at handling JavaScript than earlier releases. I fully support Microsoft's efforts at improving JavaScript and look forward to the day when all browsers support JavaScript equally well.

## JAVASCRIPT TIPS: TABLE MANNERS

If your JavaScripts behave erratically when you are trying to use Javascript to write table cells, make sure that you initiate the cell within your "document.write" sequence. If you don't, your "document.write" statements may not function at all, send source code directly to the screen, or otherwise make you look like an idiot to the casual visitor.

Follow these simple steps. First, use the `<TD>` tag to initiate the cell within your "document.write" sequence. Next, fill the cell with your content. Finally, close the cell tag using the `</TD>` tag. It is important to make sure that all data used to complete the cell is contained within the "document.write" sequence.

Note that we can incorporate the entire cell within the "document.write" sequence in the following example:

```
<TABLE BORDER=1>
<TR><TD>Table Content</TD>
<SCRIPT LANGUAGE="JavaScript">
<!-- Hide from JavaScript-Impaired browsers
document.write("<TD>variable content using
JavaScript</TD>");
// End Hiding -->
</SCRIPT>
</TR>
</TABLE>
```

If you still have problems, you may need to include the `<TR>` and `</TR>` calls within the "document.write" statements or even incorporate the entire table.

## JAVASCRIPT TIPS

### Modifying Images

Make sure to use straight HTML the first time you send images to the screen. If you don't, your browser won't be able to determine the names of the image objects because they are not loaded into the memory array used by Netscape. Once the images have been loaded, you can use JavaScript to replace or alter them at will.

### New On the Bookshelf

*The JavaScript CD Cookbook* by Erica Sadun, is a tutorial on CD-ROM with lots of little working examples. This is the best learning tool I've seen yet for new programmers and scriptwriters. The CD contains over 100 "recipes" and templates with commentary and source code. I tested it with

Netscape 3.0 and IE 3.0 (Build 4.70.1155) and most of the scripts worked just fine. (Are you happy, Bob?) The interface is quite elegant and fairly intuitive. The examples are simple and the code well documented.

I must say this is by far the best introduction to JavaScript I've seen. It gets a 4.0 rating for innovation, intuitiveness, and functionality. This is the first software product that has earned a perfect score. For order information, contact Charles River Media, Inc. PO Box 417, Rockland, MA 02370; <http://www.charlesriver.com>, <mailto:chrivmedia@aol.com>; (800) 382-850. You can also order this title from the JavaScript Resource Center.

## WebScript of the Month

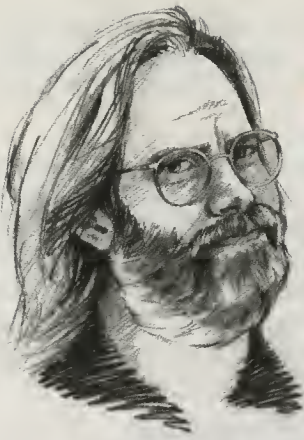
Our script this month is actually a pair of mail related JavaScripts. The first, a simple validation script by Erica Sadun, looks for the @ sign to ensure that form input is indeed a valid e-mail address. The second JavaScript included in our little toolkit mail bombs spammers. I don't recommend the mail bomb solution to spamming. Although it might be emotionally satisfying, the tactic is as logically inconsistent as the state killing killers because it's wrong to kill. John Michael Keyes and I are working on a more elegant solution — a script that will automatically grab junk mail, parse the header for contact information, open a pipe to Internic, query for system administration contact information, and then generate an e-mail response to the ISP informing them of the netiquette violation and the identity of the perpetrator. We'll report back to you once the script has been thoroughly field tested.

Get these and other JavaScripts from the *Sysnews.Com JavaScript Resource Center* at <http://www.sysnews.com/webscripts./java.htm>. Select articles and capture this month's scripts with your browser's File Save feature or download [mail.zip](#).

You can also have the scripts sent to you automatically each month by joining our mail list. To join, send [mailto:list\\_serv@sysnews.com](mailto:list_serv@sysnews.com) with your name, e-mail address, and the words **subscribe javascript-l** in the body. Please submit questions in our JavaScript conference area or our listserv. Scripts may not appear on our site until the print edition has been on the street for a few days.

## NOMINATE YOUR FAVORITE WEBSOCKET

Each month Steve Graves will pick and analyze a webscript that meets three criteria. 1. It must demonstrate webscripting power and flexibility. 2. It must be freely available to WebMasters. 3. The application must be unique, practical, cool, or otherwise of value to the online community. If you have written such a script or know of one, please write to Steve Graves at <mailto:editor@sysnews.com>. ♦



# Java Jitters

by Doug Shaker

## CHOOSING DEVELOPER'S TOOLS AND BOOKS

Last month, after several harrowing trials, I managed to get my machine, "Coyote," upgraded to Windows NT. I must say, I love the operating system. I haven't done any benchmark testing or anything formal, but on my machine (32mb of RAM, 90mhz Pentium) it is just as fast or faster than Windows for Workgroups 3.11. It is also — praise the Lord and knock on wood — stable. With the 16-bit Windows, I had three or four programs that I needed to use and which I knew were not well behaved. I had to reboot after using any of them or, sooner or later, my machine would lock up and I would have to Ctrl-Alt-Del or reset to get out of it. I got used to the continual rebooting, but it annoyed me. Win 3.x is a crappy operating system that can't defend itself from a program with a simple pointer error.

Windows NT 4.0 is far from perfect. The documentation is nearly all electronic and the stuff I can find is pretty thin, at least compared with the complexity of the operating system. And there are still mysterious errors. My favorite is "Cannot load dialog. Error 614: Out of buffers." As far as I can tell, this means that NT wanted to open a dialog box to tell me something, but it could not, so it opened an error dialog box that told me it couldn't open the dialog box. I think. I searched the help files for half an hour and couldn't find anything relevant, so I gave up.

Still, NT is fast, it has that nice new interface — just like a 1986 Macintosh — and it comes with a pinball game that can keep you unproductive for hours. I like it!

The point of converting to NT was to allow me to learn Java, so last week I loaded a copy of *Symantec's Café* on to my system and started playing around. You can try to learn Java with the naked JDK (Java Development Kit) compiler from Sun Microsystems, but don't unless you are *really* poor. There's just not enough in the naked JDK to make your learning very efficient. It's like building a rocking chair with a jack-knife and a box of sandpaper. You can do it, but what's the point?

There are two versions of Symantec's Café — one is just called Symantec Café, and the other is called Symantec Visual Café. The main difference, as far as I can tell, is that Visual Café adds a visual programming environment to the simpler integrated development environment (IDE) in regular Café.

If you haven't ever used one, a visual programming environment is a programming system that represents code as icons that the programmer drags with the mouse from a palette onto a workspace. Then the programmer connects the icons with "rubber band"

lines. These lines represent calls from the code for one icon to the code for the other icon. Visual programming environments are very useful and very efficient for small applications. But they don't scale worth sh\*t. They are terrible for large or complex applications. "Power users" tend to love visual programming environments and the professional programmers tend to hate them. I don't hate visual programming environments, but they do give me the creeps. Give me a good IDE any day.

Given my preferences, I'll be using the cheaper, non-visual Symantec Café, (between \$110 and \$125 from your local retailer, <http://www.symantec.com>, mail to: [sales@symantec.com](mailto:sales@symantec.com), (408)253-9600). It is a good fast development environment with a decent debugger and a nice editor. It is well thought out and I like it.

Another reasonable alternative would be Sun's new *Java Workshop* (about \$100, <http://java.sun.com>). I took a look at it. Java Workshop is supposed to be written entirely in Java and it certainly seems less PC-centric than Café. In some ways this is good — Sun won't be making any unconscious platform assumptions that could screw up portability — and in some ways this is bad. Sun's product doesn't really take advantage of all the nice interface features in Windows 95 & NT. Sun's Java Workshop also has an interface builder tool, which is nice, but Java Workshop doesn't seem as mature as Symantec Café. If you want to give Java Workshop a look, Egghead's web site (<http://www.egghead.com>) has a downloadable 30-day free trial copy. For myself, I am sticking with Café until I have a reason to change.

Symantec Café comes on a CDROM with virtually no printed documentation. It does have a decent help file, and a complete but boring online tutorial. I stuck with the tutorial for a hundred pages or so and then blew it off. I kept hoping for some sass, some humor, or something fun in the tutorial — no such luck. It's a straightforward, workman-like introduction to Java.

Anyway, an online tutorial sounds good, in theory, but, in practice, it stinks. Most IDEs assume, with good reason, that they can and should use up all of the screen on a professional programmer's display. There isn't any space on that screen for an online tutorial. When you want to use the tutorial, you either have to print the whole thing out or you have to keep opening and closing windows. I tried using it online and when I got to the part where you needed to start typing in code it was really tedious — read a line of code, switch to the IDE, type in a line of code, switch to the tutorial, read a line of code, switch to the IDE, type in a line of code, switch to the tutorial — really tedious. I had to start printing out pages from the tutorial.

Doug Shaker is a free-lance technical writer in California. He has one wife, two children, three pets, and five computers. The computers are obviously out of hand. He can be reached via e-mail at [mailto:doug@theshakers.org](mailto:mailto:doug@theshakers.org). Yes, that is a personal Internet domain. We told you the computers were getting out of hand.



At that point, I thought, "As long as I am going to use a paper tutorial, why not blow off these loose-leaf sheets and get the finest in hard copy — a book!" I bopped down to the local bookseller and picked out three of the thousand or so Java books they have on display — **Java by Example** by Jerry R. Jackson and Alan McClellan (Prentice Hall, \$34.95, ISBN 0-13-565763-6), **Exploring Java** by Patrick Niemeyer and Joshua Peck (O'Reilly & Associates, \$24.95, ISBN 1-56592-184-4) and **Just Java** by Peter van der Linden (Prentice Hall, \$34.95, ISBN 0-13-565839-X).

**Java by Example** was highly recommended to me by someone who has the experience to know. The book certainly lives up to its name. It's chock full of code examples. I would guess — no, I'm not going to count them, even for you — that there are, on average, two or three code examples per page. The text is straightforward and clear — that's nice for a change. It comes with a CD-ROM that includes a "Lite" version of Symantec Café and version 1.0 of JDK. I liked it a lot and felt like I should have it on my bookshelf, if only because there are so many code examples. There have been too many times when I have

been coding, trying to get something to work, but failing persistently. If I take a look at a working example that someone else has written then I immediately have some sort of "Ah-ha!" experience that allows me to get my code working. This book looks like it would fill that need completely.

I bought **Exploring Java** mostly because it was published by the incredibly good software documentation house of O'Reilly and Associates. These are people who have made a good living by understanding that good documentation doesn't have to be boring or brain-dead. Their documentation in some cases — X windows, for example — is so good that hardware manufacturers don't bother to publish their own documentation. They just give you or tell you to get a copy of the O'Reilly books.

**Exploring Java** seems to be the most complete book of the three. For example, this book is the only one of the three that gives a reasonably good explanation of how to avoid flicker in an applet which allows the user to drag a large bitmap over an even larger bitmap. **Exploring Java** is intended to be the introductory book in a series of more advanced Java books. If this is the intro-

duction, I'm willing to bet that the series will be so masterful and accomplished that the series will eventually be the standard reference texts for Java.

My favorite, however, is Peter van der Linden's **Just Java**. It includes the same CD as the one in **Java by Example**. **Just Java** is great. It is the only programming language book that I have ever seen that is genuinely enjoyable to read. For example, Van der Linden was bored by the "Hello, World" example used by all the other authors, so he starts with a program that checks for the infamous divide error in Pentium processors. He accompanies the code example with a two page explanation of the whole Pentium debacle, just so you will have the proper perspective on your initial program. Later, when he discusses applets, he explains, "Just as a booklet is a little book, an applet is a little application." He adds "We also note that a piglet is a little pig. And it takes more than a little skill to use a skillet. And Scarlet has a little scar. And so on." This is an instructional text with sass, humor, and skill. The explanations are clear and nearly every page has something interesting or funny to say. I love it. It's the book I'll be using as I try to learn Java. ♦

## ISPs: LOOKING FOR A REMOTE ACCESS SERVER THAT IS FASTER, MORE RELIABLE, & LESS EXPENSIVE?

Look no further! Computone's IntelliServer **PowerRack** is exactly that! In comparison to Livingston's Portmaster, the PowerRack has a per port capacity of **921.6Kbps** (Portmaster -- 115.2Kbps), the PowerRack can support **16-64 PPP lines** (Portmaster -- 10-30), the PowerRack's average price per port is \$60 for 64 ports (Portmaster -- \$97 for 30 ports), and the PowerRack has a **5-year warranty** (Portmaster -- 1 year), **FREE** lifetime technical support and software upgrades, and a 30-Day evaluation option.

The PowerRack also has the standard feature list: dial-in/dial-out access, a powerful RISC CPU, Ethernet connectors, ISDN capability, PPP, SLIP, CSLIP, *bootp*, *rlogin*, *telnet*, reverse *telnet*, PAP/CHAP authentication, RADIUS II, RIP II, SNMP MIB II, subnet routing, IPCP DNS exts. for Windows 95, and IP filtering.

PowerRack user and Internet Service Provider Michael Behrens, of InterNet Kingston ([mbehrens@kingston.com](mailto:mbehrens@kingston.com)), commented, "The PowerRack is an attractive product, both in its ability to do the job well and to do the job... cost effectively. Port for port costs are significantly lower than the Livingston Portmaster. The product lives up to its name... performance under load is exceptional! The PowerRack also offers a significant feature for feature comparison against the available competition (i.e. Livingston Portmaster). And, technical support was extremely knowledgeable and responsive."



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# Notes From The Underground

by Wallace Wang

## A VIRUS HUNTING EXPEDITION

In the course of exploring the Internet and downloading a variety of underground programs for possible inclusion in this column, it was inevitable that a computer virus would one day pop out of a hacker program and get loose on my hard disk. Fortunately, McAfee's VShield program caught the Tentacles virus, one of the newer Windows-based viruses, as it tried to spread.

After letting an older version of McAfee's **VirusScan** program clean the infected file and wipe out the Tentacles virus, all went well — until VShield screamed that the Tentacles virus had infected another file. Running VirusScan killed the Tentacles virus once more. Then just as I started using the computer again, VShield shouted out another warning.

Apparently the Tentacles virus had managed to spread to several files on my hard disk before VShield could even catch it. So I ran a newer version of McAfee's VirusScan (evaluation version 2.05 using the signature file 9608) one more time to kill this pesky virus once and for all — and VirusScan found thirteen files infected by the Tentacles virus and one file infected by the Brain Ashar virus.

Curious, I decided to let those viruses live long enough to see what would happen if I scanned my hard disk with The **Norton AntiVirus** version 2.0 for Windows 95. While VirusScan claimed to examine 4,574 files, the Norton AntiVirus only examined 3,044 files, and both programs were supposed to scan program files, ZIP files, and Microsoft Word files.

Both VirusScan and The Norton AntiVirus detected the Tentacles virus in the same thirteen files on my hard disk, including two hacker programs (dubbed AOL4Free and Destructive Mass Mailer) that I suspected had introduced the Tentacles virus to my computer in the first place. But the Norton AntiVirus found no sign of the Brain Ashar virus.

To verify whether the Brain Ashar virus really existed or not, I loaded a third anti-virus program, the DOS-based **F-Prot** version 2.24a, to see what it would uncover. F-Prot only scanned 689 files (ignoring Microsoft Word documents and ZIP files). It found *eighteen* files infected with the Tentacles virus, but no sign of the Brain Ashar virus that VirusScan claimed to have found.

So now several questions remained. How come VirusScan and The Norton AntiVirus scanned a different number of files, even though they were both supposed to scan the same types of files? Why did

VirusScan claim a file was infected by the Brain Ashar virus but neither The Norton AntiVirus or F-Prot found it? And how come F-Prot found the Tentacles virus in five *more* files than either VirusScan or The Norton AntiVirus?

While it's tempting to reach the quick conclusion that F-Prot is superior to VirusScan or The Norton AntiVirus, keep in mind that this was an informal test with one (possibly two) viruses. If a different virus infects your computer, it could slip right by F-Prot while getting caught by VirusScan or The Norton AntiVirus.

In other words, there is no one best anti-virus program. To fully protect your computer, use a single anti-virus program consistently but keep a second or third anti-virus program around to check for viruses that the first anti-virus program might have missed.

I initially scanned my hard disk using McAfee's VirusScan version 2.01, which is a much older version of their program. Even though I used their latest signature 9608 DAT file, this older version of VirusScan never found the Tentacles virus at all. So not only do you need the latest version of an anti-virus program, but you also need the latest signature files to tell the program how to recognize the latest viruses.

If you use the latest anti-virus program but have an older signature file, a virus could get past it. If you use the latest signature file but an older version of the anti-virus program, a virus can still slip by it. Only if you get the latest signature file and the latest version of your anti-virus program can you be relatively sure that your computer is safe.

Anti-virus companies tend to release updates to their signature files monthly or quarterly, so make sure you get the latest files as soon as they're available. Then make sure that you always have the latest version of your favorite anti-virus program as well.

If this sounds like you have to spend most of your time looking for updates and version changes in your favorite anti-virus program, you're right. And even then there's still no guarantee that your anti-virus program will catch a virus ravaging your hard disk because that virus may not have been analyzed yet by the company that makes your anti-virus software. (Aren't computer viruses fun?)

## CLEANING A VIRUS INFECTED FILE

If you're lucky enough to find an infected file before too much damage has occurred, you have two options.

Wallace Wang is the author of **CompuServe For Dummies**, **Procomm Plus for Dummies** and **Visual Basic for Dummies** (all published by IDG Books) as well as **Surfing The Microsoft Network**, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672@compuserve.com or botheekat@aol.com Or bo\_the\_cat@msn.com



You can delete the infected file (killing the file and the virus simultaneously) or attempt to clean it. However, not all anti-virus programs know how to clean an infected file.

Since F-Prot found the most infected files, I let F-Prot try to clean all files infected by the Tentacles virus. Unfortunately, F-Prot failed to clean a single file. Instead, F-Prot renamed the infected files to prevent them from running and spreading the infection.

VirusScan tried to clean all the Tentacles infected files and it too failed, recommending that I delete the files instead. Finally, The Norton AntiVirus tried to clean each file and succeeded. Running the previously infected file proved that The Norton AntiVirus had indeed cleaned the file so it was capable of running again.

If I had relied on either VirusScan or F-Prot, all of my infected files would have been as good as gone. But The Norton AntiVirus managed to rescue all the infected files, sparing me the time and annoyance of copying clean, backup versions of the infected files back on to my hard disk.

So now which is the better anti-virus program? F-Prot found more files infected by the Tentacles virus, but The Norton AntiVirus was the only one that cleaned all infected files. But if I had relied on The Norton AntiVirus to detect the Tentacles virus, it would have missed the five extra files that F-Prot claimed the Tentacles virus had infected (unless F-Prot's diagnosis of these five extra infected files was wrong).

If you thought choosing which browser to use was confusing enough, deciding which anti-virus program to use is an exercise in total frustration. As each company updates their anti-virus program, they add capabilities that rival anti-virus programs may lack.

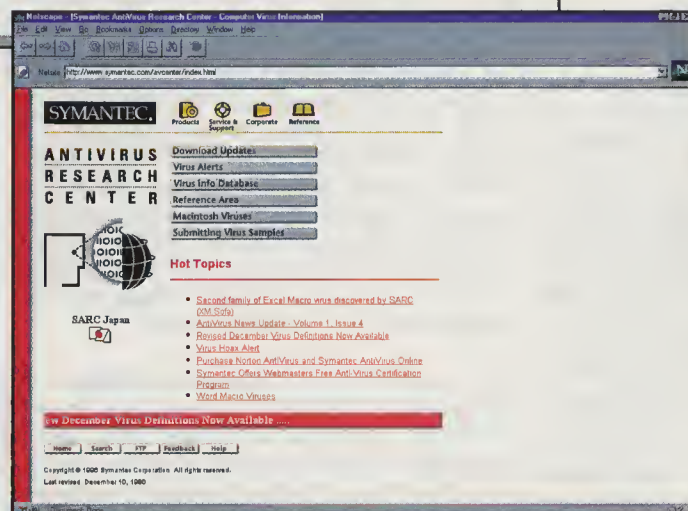
While this particular version of VirusScan came off looking second-best compared to F-Prot and The Norton AntiVirus, a newer version of VirusScan (or tests with a different virus) might look superior.

So the next time you see a magazine comparing various anti-virus programs and giving one or two of them their "Mark of Excellence" or "Seal of Approval," don't be fooled. Consider the number and type of viruses the magazine used to test each anti-virus program, and remember that each anti-virus program increases or decreases in effectiveness with each revision. That means the highly touted anti-virus program of today could be the least effective anti-virus program by the time you decide to buy it.

Just keep your anti-virus programs up to date, scan every new file you introduce to your computer, and pray that if a virus does infect your computer, it won't wipe out any data before your anti-virus program has a chance to catch and kill it. Other than that, just accept the risk that using the Internet greatly increases the odds that you'll run across a virus eventually and be prepared.

## OBTAINING AN ANTI-VIRUS PROGRAM

While the two most popular North American anti-virus programs are McAfee's VirusScan (<http://www.mcafee.com>) and



Symantec's Norton AntiVirus (<http://www.symantec.com>), you might want to explore anti-virus programs developed in other parts of the world just to see how good North American anti-virus programmers fare against their international counterparts.

Besides the Icelandic based F-Prot (<http://www.datafel.lows.fi>), there's ThunderByte (<http://www.thunderbyte.com>) from Germany, Dr. Solomon's AntiVirus Toolkit (<http://www.drsolomon.com>) from England, Avast (<http://www.anet.cz/alwil>) from the Czech Republic, DialogueScience Anti-Virus Kit from Russia (<http://www.kiam1.rssi.ru>), Carmel Anti-Virus, the original developers for the now defunct Central Point Anti-Virus program, from Israel (<http://fbsolutions.com/ntav>), and VPS from South Africa (<http://africa.cis.co.za:81//csir/info/vps/des-vps.html>).

With so many programmers all over the world studying the growing virus threat, there's a good chance that at least one of these programs will be able to protect your computer from a computer virus. If you download files from the Internet often, it's not a question if you're going to catch a virus, it's a question of when. ♦





# EDUCATION LINK

by Rea Andrew Redd

## CAN YOU LOSE YOUR JOB TO THE INTERNET? A TALE OF TWO CLASSROOMS

You would think that Academic Systems Corporation (ASC), being four years old and bankrolled by Microsoft, Inc., TCI, Inc., Jostens Learning Corporation and Softbank Corporation, would have more color in its brochures, more exhibit booths at conventions, more in-your-face marketing. Instead, its promotional literature is footnoted with citations from the *Journal of Educational Psychology* and its meetings with prospects are held in quiet rooms, over meals. ASC sells computer-based algebra courses. ASC's studies indicate that its courses have higher passing rates for students than those courses taught solely by human instructors. ASC's research has also found that students who pass its courses do better in future math courses than do those students who are taught solely by live instructors.

As reported by the *Chronicle of Higher Education* (October 25, 1996), ASC has produced three "mediated-learning" mathematics courses which are used on 40 campuses, about one third of which are in California and New York. Mediated-learning consists of software and a textbook. Real world problems are presented to students, who are generally taking the course because they are non-math majors struggling with traditional math instructional methods. Boosters of the software state that it takes the tedium out of teaching, that instructors intervene at the right time during the student's lesson. Instruction becomes more personal and less generic in the mediated-learning classroom.

Yet, there is a price tag; a site license is \$80 per student and the software is on CD-ROM, which takes a lot of computing power. Fears of mediated-computer instruction taking the jobs of faculty may be realized as computer labs grow to more than 24 stations; but in an experimental mediated-computer math class with no instructor present, many students' grades dropped and many others did not complete the lessons.

Are computer-maintained classrooms the future on campus? It's likely. If you add to this mix a dwindling enrollment, will faculty numbers be cut? Will a campus looking to expand its student body turn to distance learning via the Internet? It's likely.

The New School for Social Research, a New York City institution with 33,000 students, has vigorously turned to the Internet to bolster a sagging enrollment, reports the *Chronicle of Higher Education* (October 13, 1996). In the 1995-6 school year, over 500 students were added to its student body, taking nearly 90 different courses over the Internet. Some NSSR students, with over 60 credit hours, can finish their BA degrees over the Internet. These courses are not primarily computer-mediated, but use dialog among students and the

instructor. Access and convenience are the hallmarks of the NSSR courses. The NSSR is now swapping liberal arts courses for science and technology courses at Rochester Institute of Technology. One of the reasons for the NSSR faculty's readiness to put their courses online is the fact that many of them are adjunct faculty whose pay is based on the number of classes they teach.

So will math classes mediated by computer and liberal arts classes taught over the Internet decrease or increase the number of job opportunities for faculty? Whatever the answer, it is clear that college faculty will be changing how they teach and that the traditional stand-in-front-of-the-class presentation has forever been changed.

## WHERE'S THE MONEY FOR INTERNET II?

Last October Bill Clinton promised \$500 million in federal money over five years, beginning in 1998, to improve Internet capabilities at 100+ universities, colleges, laboratories and libraries. The 1998 federal budget should have in it \$100 million to rewire the electronic infrastructure for the next generation of Internet tools and hardware. The goal is to obtain speeds of over 100 to 1,000 times as fast as current connections allow.

Clinton's plan, dubbed "Internet II," is supported by 34 research universities hoping to garner a share of the funds to create a national network which would be their nearly exclusive domain. Faster fiber optic networking hardware would eliminate bottlenecks that frustrate academics doing research via the Net. Organizers of Internet II have agreed to charge themselves and possibly 100 other institutions membership fees to fund a portion of this high speed Net. They hope to be supported by corporations in the computer and telecommunications industries.

Leaders in the initial 34 member organization are Pennsylvania State, Chicago and Stanford Universities, and the state universities of California, Michigan, and North Carolina. They are somewhat at odds with each other over what role the National Science Foundation (NSF) should play in building Internet II. One opinion holds that a nonpartisan organization should hold the purse strings and referee between universities and corporations. A second opinion holds that repeating the 1986 NSF decision to issue a contract for the operation of NSFNET would be a mistake. Cooperation and competition are being weighed on the scale of Internet II's need for high speed within the soonest possible time frame.

With even Bill Clinton pronouncing that the era of big government is over, most Internet II members appear to think that it will be decentralized and very competitive.

Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit.  
E-mail Rea at: [malto:redde@genesis.duq.edu](mailto:malto:redde@genesis.duq.edu)



Another issue is one presented by **Educom** vice-president Michael Roberts, whose organization represents 600+ colleges and 100+ companies. He sees the challenge of Internet II as being not the invention of it but the integration of it among the present customer base of the American educational community. The NSF's Very High Speed Backbone Network Server (VBNS) links the federal supercomputer centers, which includes several universities, and 13 colleges. The VBNS now operates at 155 megabits a second and may go as high as 622 megabits a second some time this year. The fastest parts of Internet I now operate at 52 megabits a second. It is not expected that a new VBNS will be built to carry Internet II; Roberts thinks that the members of Internet II will receive their high speed connections through the present VBNS. Other organizations, including schools and corporations will hook up to Internet II through a MCI or an ATT link.

## MAGICIANS AND MANUFACTURING

The National Digital Library (NDL), sponsored by the Library of Congress, offers two very browsable and uniquely American Web sites at <http://www.loc.gov>. The **Houdini Collection** is a part of the American Variety Stage portion of the Web site. Another exhibit, **Inside an American Factory: The Westinghouse Works**, focuses upon turn-of-the-20th century industrial life.

Harry Houdini bequeathed his collection of rare books and manuscripts on the history of magic and his personal documents to the Library of Congress. Highlights from this collection are now electronically available through AVS, a multimedia anthology which illustrates the diverse and vibrant forms of American popular culture. With close attention to the vaudeville stage of the 1870-1920 era, the AVS collection draws from English and Yiddish theatre documents and scripts. Theatre posters and sound recordings are scheduled to arrive at the AVS in the next two years.

"Inside an American Factory: The Westinghouse Works" contains very rare motion film footage of working machinery on the factory floor. Workers are filmed performing their tasks. The LC web site includes background information about working conditions in the Westinghouse plants, the New York subway system and the hydroelectric plant at Niagara Falls.

### THE K-12 BROWSER

**Electronic Learning**, a publication of Scholastic, Inc. ([scholastic.com/EL](http://scholastic.com/EL)) started looking ten months ago for the top WWW sites of interest to k-12 educators. Winnowing nominations from hundreds of teachers, three judges picked the following to be of greatest value:

- 1) Global School Net .....<http://www.gsn.org>
- 2) ERIC Clearinghouse .....<http://ericir.sunsite.syr.edu>
- 3) Guide for Educators .....<http://www.capecod.net/WIXon/Wixon.htm>
- 4) Math/Geometry Forum .....<http://forum.swathmore.edu>
- 5) Create Your Own Newspaper .....<http://crayon.net>
- 6) Journey North .....<http://www.ties.K12.mn.us/~jnorth>
- 7) NASA Home Page .....<http://www.gsfc.nasa.gov>
- 8) School Library Hotspots ....<http://www.mbnet.mb.ca/~mstimson/text/hotspot.html>
- 9) Classroom Connect .....<http://www.classroom.net>
- 10) Franklin Institute Museum .....<http://sin.fi.edu>
- 11) Nine Planets .....<http://seds.lpl.arizona.edu/nineplanets/nineplanets>
- 12) Mega-Math .....<http://www.c3.lanl.gov/mega-math/menu.html>
- 13) CNN Interactive .....<http://www.cnn.com>

## CLASSROOM CONNECT: FACE TO FACE

Classroom Connect has designated the Mid-Atlantic region as the site of its **Connected Classroom Conference**. The k-12 education/technology conference will be at the Valley Forge, Pennsylvania Convention Center from April 30 through May 3. Teachers, administrators, technology coordinators and education professionals will be exploring all aspects of planning, coordinating and assessing k-12 Internet lessons, units, and curriculums. To register for the conference, voice call (800)411-3393 or fax (707)747-6437; <mailto:ccc@classroomconnect.net> or <http://www.classroom.net/connected>.

Classroom Connect's latest book is **Creating Acceptable Use Policies**, a 320 page guide for administrators, principals, technology coordinators, library media specialists, teachers and public librarians who are involved in managing Internet access in an educational and/or library setting. For \$40 you get the guide, a multiplatform CD-ROM with sample AUP agreements, student letters, parent letters, management documents, agendas and other customized tools for drafting site-specific AUPs.

To request the Classroom Connect catalog call toll free 888-252-7776, fax (717)393-5752, <mailto:connect@classroom.net> or see the catalog and leave your address at <http://www.classroom.net>.

## THE COLLEGIATE BROWSER

The **Western Interstate Commission for Higher Education** (WICHE) offers WWW access to news and information on related policy and its administration. The site includes research data on tuition, distance education, student migration between institutions and other concerns. Conference announcements, a WICHE directory, and electronic links to other higher education organizations are found at <http://www.wiche.edu>.

The **American Association of University Women** (AAUW) maintains a Web page with a focus on equity issues in higher education. Visitors to <http://www.aauw.org> have access to public policy issues, the AAUW activities, membership, awards, fellowships, grants and links to related resources.

**Catalyst**, a scholarly journal focusing on community college and continuing education is online at <http://borg.lib.vt>

.edu:80/ejournals/CATALYST/catalyst.html. Articles cover topics such as administration, faculty, adult education, student retention, and the impact of technology on pedagogy.

## LITERATURE

The *University of British Columbia* at Vancouver offers an online journal focusing on English literature, culture and the language of the 1500's and 1600's. *Early Modern Literary Studies* contains the full text of the print journal's articles, access to back issues, links to related WWW pages, discussion groups and a directory of texts in electronic format from those centuries; visit <http://un-ixg.ubc.ca:7001/0/e-sources/emls/emlshome.html>.

## HEALTH AND MEDICINE

Baylor College of Medicine offers the *Huffington Center on Aging* at <http://www.bcm.tmc.edu/hcoa> which contains information related to education and training, and research data for the field. Eclectic items such as the artwork of older artists and learning modules on topics such as diet and heart failure are online. The Cleveland Clinic foundation can be accessed at <http://www.heartcenter.ccf.org:8080/magazine/heartlin> and includes an electronic version of the cardiologist's magazine *Heartline*.

## MEMO FROM THE DEEP POCKETS DEPT.

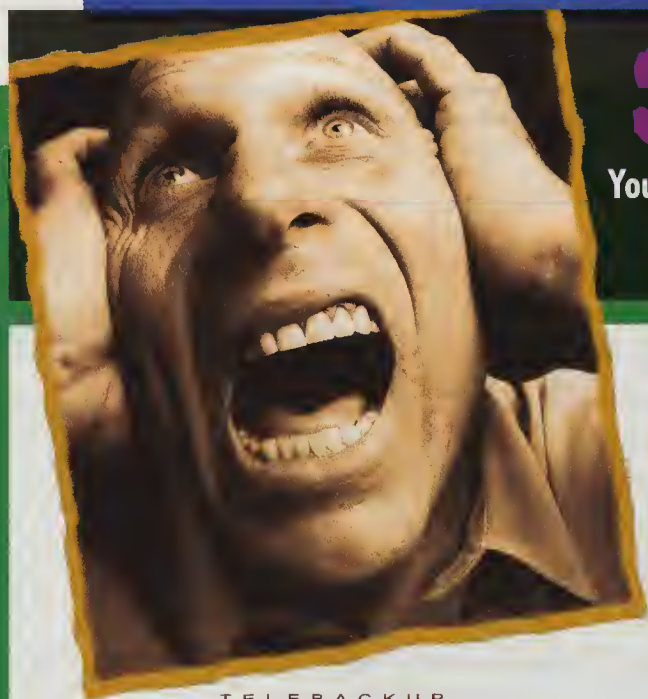
Microsoft Corporation is launching *Libraries Online!* with **\$10.5 million** in gifts to public libraries in economically disadvantaged communities. The program kicks off in Microsoft's

backyard, King County Public Library System (KCPLS). Based upon the success of a 1995 pilot program managed in part by the American Library Association (ALA), Microsoft is contributing dollars, hardware, software and technical assistance to over 40 public library systems in the U. S. and Canada which will serve 200+ communities. The selection of the King County system occurred three months ago and will pick up \$315,000 in goods and services from Microsoft, Inc.

KCPLS will use the new gift to add WAVE to five more libraries and extend word processing, spread sheets and CD-Rom titles through the 20 site system. For more information phone Jeanne Thorsen, Manager of Community Relations of KCPLS at (206) 684-6606, or John Pinette, Public Relations Department, Microsoft, Inc. (206)882-8080.

## CALIFORNIA AND NEVADA EDUCATORS

Pacific Bell supports collaborations between school districts and community organization that focus upon 1) school-wide and district-wide change, 2) integration of technology in teaching and learning, and 3) special projects; PacBell offers a continuous grant program to support these efforts. Send a letter of intent which describes the project to the Pacific Bell Foundation, Pacific Telesis Center, 130 Kearney Street, Room 3309, San Francisco, Ca 94108, or call (415)394-3693. ♦



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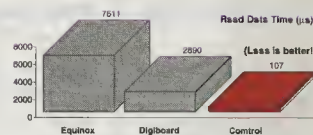
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# MANNING THE WIRES

by Ric Manning

## GETTING YOUR SHARE OF WEB AD DOLLARS

It's just been about two years since HotWired opened the Web to advertising by launching a site backed by 14 charter sponsors. Since then, Web advertising has become a booming business.

**Advertising Age** reports that about half of the top 100 national advertisers purchased some sort of Web advertising last year. Jupiter Communications, a New York consulting firm, says advertisers spent more than **\$300 million** in 1996 to market their products on the Internet. And Forrester Research, another market forecaster, predicts that online advertising will be a \$5 billion market by 2000.

With that kind of money floating around, you'd think anyone with a Web site and a slot for a banner would be on the gravy train. But you'd be wrong. The lion's share of that money gets recycled back to the same companies doing the spending. It's sort of a private poker game among the Net's high rollers.

Here's an example: **Infoseek**, the Web search service (<http://www.infoseek.com>) ranks second on Jupiter's list of Web publishers. It also ranks second, behind Microsoft, among web advertisers. Jupiter says **C/Net** (<http://www.cnet.com>) took in about \$2 million in revenue in the second quarter of 1996 but spent \$1 million on advertising during the same period.

Other high-profile Web publishers such as Netscape, Yahoo!, Lycos and Excite each spent more than \$1 million on Web advertising.

Web site operators who don't have hundreds of thousands of daily visitors are finding that lining up sponsors can be a hard sell.

"We targeted big categories like car dealers and developers and we killed ourselves for that first sale," said Amy Rabinowitz, Sales Marketing Manager for the **Houston Chronicle's** Web site (<http://www.chron.com>). "But once we got it, the rest came like sheep."

**Real Media** (<http://www.realmedia.com>), a New York-based advertising management and placement agency, has put together a program aimed at helping smaller Web sites get a piece of the online advertising action. By stringing together groups of smaller sites, Real Media can create advertising packages that draw enough traffic — or the right demographics — to interest national advertisers.

"We work with newspapers as small as the **Pittston Gazette** to the **Chicago Tribune**," said Greg Gendron, vice president of product marketing for Real Media.

Real Media also has software that helps sites count and track their ad traffic and programs that manage ad displays. "We are remotely inserting ads in more than 100 newspapers," Gendron said.

Real Media likes to work with newspapers because it believes news-oriented sites that constantly refresh their content are the best at attracting the viewers that advertisers want to reach.

But Real Media also works with several non-newspaper sites, such as one site that has a database of golf courses, if the site appeals to a specific audience. "We're always thinking in terms of demographics and how the advertisers can be served by being on a particular site," Gendron said.

What can Webmasters do to make their sites attractive to advertisers? Gendron and others in the business offer these suggestions:

### KNOW YOUR AUDIENCE

Advertisers are willing to pay more to place ads that reach their target markets. For example, Microsoft knows that Windows 95 users are more likely to try its new Internet Explorer browser than Web surfers who use Windows 3.1, Macintosh or some other operating system.

By working with sites that poll their visitors, Gendron said Real Media was able to create a package for Microsoft that reached only Win 95 users. Gendron said those users were worth more to Microsoft, so the company paid a higher price to get to them.

### GET READY FOR STANDARDS

You may have carved out a lovely spot for a banner ad on your front page. But if it doesn't match what an advertiser has in mind, you're not going to sell it.

When Real Media was planning a promotion that would include Web sites in 32 markets, it found that it would have to deal with more than 60 different banner sizes. Gendron said more advertisers are beginning to dictate banner sizes instead of leaving it up to the host sites.

At the same time, there's a move to adopt standard ad sizes. CASIE, the Coalition for Advertising Supported Information & Entertainment, an ad industry group, has issued a proposal that calls for creating six banner sizes and positions on a Web page. Even if the CASIE plan is not adopted completely, more advertisers are going to want to work within a standard set of guidelines.

Ric Manning writes about business technology, computers and consumer electronics for **The Courier-Journal** in Louisville, Ky. His weekly column called **Home Tech** is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web <http://iglou.com/gizweb>

Ric was the founding editor of **Plumb** and **Bulletin Board Systems**, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including **PC Computing**, **Mobile Office**, **PC Week** and **Home Office Computing**. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at [mailto:ricman@iglou.com](mailto:mailto:ricman@iglou.com)



## MARKET YOUR CONTENT

Advertisers increasingly want more than just eyeballs from their Web ads, they want to be associated with specific types of content. When Mellon Bank posted ads on the Web, it wanted them placed in the financial sections of online newspapers. Sports marketers want their ads adjacent to sports information.

Some companies might even underwrite the cost of a special section on a Web site if the content is a good fit with their products. A good example is a family-oriented site called **Parent Soup** (<http://www.parentsoup.com>) where sponsors such as Polaroid and MGM/UA underwrite some of the departments.

Here's a sample of Web sites that will help you keep abreast of trends in Internet advertising:

### WebTrack

<http://www.webtrack.com>

WebTrack publishes **AdSpend**, a monthly Web advertising placement report that tells who is spending where on the Web. Fill in the registration form and you can have a peek at a sample issue. The site also has an index of big-

time advertisers and an index of sites which accept advertising. Check WebTrack's advertiser database (<http://www.webtrack.com/adverts/adverts.html>) to find companies that might want to reach your users. Enter your e-mail address and WebTrack will tell you each time the list is updated.

### Advertising World

<http://www.utexas.edu/coc/adv/world>

The University of Texas maintains an exhaustive list of advertising-related sites and resources for use by advertising and marketing professionals as well as students and teachers.



### Softbank Interactive Marketing

<http://www.simweb.com>

Softbank Interactive Marketing acts as a sales representative for Web sites that want to attract advertisers.

### DoubleClick Network

<http://www.doubleclick.net>

Like Real Media, DoubleClick pools ad space on a number of sites to create a narrowly-focused market for advertisers. When users visit a Web site that is part of the DoubleClick network, they see an ad banner that matches the user's profile.

### Focalink

<http://www.focalink.com>

Focalink produces software that lets marketers identify and compare Web advertising opportunities and manage complex advertising plans.



### Online Advertising Index

<http://www.netcreations.com/ipa/adindex>

Compiled and maintained by **Interactive Publishing Alert**, this database will let you look up ad rates for a variety of online publications and special-interest Web sites. You can also get sample peeks at Rosalind Resnick's excellent Web marketing publication. ♦

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# Internet Booms in Brazil

By Vito Echevarría

**B**razil has a knack for doing things in a big way, which is natural, since it's the largest country in Latin America with a massive population to match. So, it's no surprise that Brazil is leading in Latin America's technology acquisition race, commanding over 40% of the Latin PC market last year (1995) — while Mexico's share of the Latin PC market was under 15% that year. According to the California-based International Data Corporation (IDC - which researches computer markets worldwide), total PC shipments to Latin America rose by over 14% between 1994 and 1995 to nearly 2.3 million units.

The Brazilian market, in particular (which was off-limits to foreign computer firms as recently as 1992), is important for two reasons — one, because of the growing demand for computers there (giving unprecedented opportunities for both large and smaller computer manufacturing firms to grab a share of the Brazilian market); and two, because these same firms can set up manufacturing facilities in Brazil to market their computers in neighboring states duty-free (under the Mercosur trading bloc, where computer sales can be targeted to member states Argentina, Paraguay, and Uruguay).

These market forces explain why Brazil has perhaps the largest Latin American presence on the Internet, with a variety of web sites for business, governmental, educational, as well as for personal use.

## BRAZILIAN WEB SITES

For Americans and other non-Brazilians seeking commercial ties with this country, one only needs to tap into the *Brazilian Business Connection* web site

(<http://www.brazilbiz.com.br>). This site has valuable information on the presence of Brazilian firms who offer their service in Brazil and abroad. The firms are various in both size and types of industries — from local bars & restaurants to multinational corporations. Brazilbiz has a section called "Global Business Opportunities for Brazilians," which invites foreign companies interested in the Brazilian market to e-mail this web site and have themselves included as more foreign firms seeking business from Brazilians.

Brazilnet also has a section called "Politics, Economy & Market," which provides hyperlinks to such business-related web sites as:

**American Chamber of Commerce/Sao Paulo** (<http://www.amcham.com.br>), which contains extensive data on economics, business, citizenship, and political info between Brazil and the U.S. One of this web site's more important subdivisions is the "Business for Business" section, which contains info on trade missions, international events & trade fairs, a section dedicated to helping find business partners among AMCHAM members, a section for discovering new business opportunities, as well as Brazilian investment info and industry, company, & country reports.

If you're an American or other foreign firm concerned about Brazilian congressional initiatives and how they may affect your investments in Brazil, you can turn to AMCHAM's database on Brazilian legislative measures which cover a variety of areas — such as foreign investment, tax & finance system to international commerce, privatization, intellectual property rights in Brazil, labor relations, and energy, communications, mining, and transportation.

There are also home pages for American and other multinational members of the Chamber, firms such as Acer, American Airlines Inc., American Express Bank Ltd., Catepillar Brasil Ltda., Citibank N.A, Federal Express Corp., Fiat do Brasil S.A., Ford Brasil S.A., IBM Brasil, ING Bank, Lucent Technologies Brasil Ltda., Pepsico & Cia., Philip Morris Marketing S.A., Procter & Gamble do Brasil & Cia., Toyota do Brasil S.A., and Wal-Mart Brasil S.A. (among a dizzying array of member companies).

For further information, contact the American Chamber of Commerce for Brazil/Sao Paulo at: Rua Alexandre Dumas, 1976, Sao Paulo-SP, CEP: 04717-004, BRAZIL Tel.: (55)(11) 246-9199 Fax: (55)(11) 246-9080 or mail to: [amhost@amcham.com.br](mailto:amhost@amcham.com.br)

Other worthy business-related hyperlinks within the "Brazilian Business Connection" web site include Banco Bamerindus Sociedade Anônima (<http://www.bamerindus.com.br>) — where one can browse through the exchange rates between the Brazilian Real, the U.S. Dollar, and the Japanese Yen; the *Rio de Janeiro Stock Exchange* (<http://www.embratel.net.br/infoserv/bvzj>) and the *Sao Paulo Stock Exchange* (<http://www.bovespa.com.br>) — where the latest stock bulletins are posted.



For those wanting to find web sites for Brazilian auto manufacturers, banks, construction & architectural companies, as well as those on local politics, advertising, insurance and telecommunications, one must browse the web site **Newsnet** (<http://www.dialdata.com.br/newsnet>). In addition to the aforementioned subsections, there's a link to the Mercosur trade bloc (for the South American trading bloc that unites Brazil with Argentina, Paraguay, and Uruguay). There's also **Jornal de Brasil Online** (<http://www.jb.com.br>) — for political & business news.

Another Brazilian web site with business links & information is the **Brazilis Index** web site (<http://www.brazilis.com.br/is>). Its commercial section lists an assortment of Brazilian business-related web sites of interest to U.S. and other foreign businesses (retail-related Brazilian web sites include **Lojas Americanas** and **Nova America Outlet Shopping**, and various supermarket chains), chambers of commerce, and links to other business directories. This web site also has a list of ISPs in Brazil.

American and other foreign computer and telecom firms interested in penetrating the Brazilian technology market should consider browsing through the web site **ISDN in Brazil** ([http://www.cpqd.br:80/~jose\\_m/isdn](http://www.cpqd.br:80/~jose_m/isdn)). Here, one can find information on the introduction of ISDN service in Brazil, along with news on ISDN, ISDN links, FAQs about ISDN, information on ISDN equipment, and the ISDN service introduction plan for Brazilian networks.

The one Brazilian trade promotion web site that the government itself set up is that from the **Ministry of External Relations/Trade Promotion Department** (<http://www.dpr.mre.gov.br/index-i.htm>). The Department's goals are to increase Brazilian foreign trade, to spread investment opportunities and to stimulate the transfer of technology and the flow of tourists to Brazil.

There are three divisions with specific functions to help fulfill these goals:

- 1) Trade Programs Promotion Division (DPG): provides logistical support with programs to better prepare Brazilian entrepreneurs for international commercial activities, as well as trade information disseminated through trade promotion sections in Brazilian embassies and consulates.

- 2) Trade Promotion Operations Division (DOC): helps Brazilian exporters find prospective foreign importers, including sponsoring visits & missions of foreign importers & investors to Brazil, resolving business complaints from both Brazilian exporters and foreign importers.

- 3) Commercial Information Division: it receives, processes, analyzes and broadcasts within Brazil and abroad all information of interest to Brazilian exporters and/or prospective foreign buyers of Brazilian goods & services.

In addition to the above, this web site also has sections with information on investment opportunities in Brazil, a Brazilian Exporters Registry, a listing of Brazilian ISPs, tips on doing business in Brazil, the Mercosur trade bloc, a harmonized code for identifying products, as well as useful addresses of Brazilian embassies & consulates worldwide with trade promotion bureaus, and directories of Brazilian firms and institutions with their own web sites.

## BRAZILIAN INTERNET SERVICE PROVIDERS

Because of growing computer sales in Brazil, it's only natural that Internet use will rise accordingly. As of July

1996, there were 46,854 host sites in Brazil (with 3,306 domains), and at last count there were over 200 Internet Service Providers (ISPs) in that vast country. There are an estimated 300,000 - 400,000 Brazilian Internet users today. The following is just a sampling of such ISPs:

### EMBRATEL

(<http://www.embratel.net.br>)

Embratel (Empresa Brasileira de Telecomunicações) is Brazil's telecommunications giant. So it's no surprise that it not only provides a smorgasbord of Internet services and related technical support (WWW access, Archie, Gopher & Veronica, E-Mail, FTP, Telnet, UUCP and BBS services, plus a free home page, a chat room, and access to newsgroups), but offers it on a national basis — with offices throughout the country. Embratel charges its Internet customers an initial start-up fee of R\$35.00, plus R\$48.00 per month (for 15-hours of use) and R\$3.00 for each additional hour thereafter — making this titan ISP by far the most expensive.

(**Note:** According to the foreign exchange rate in the New York Times on 11/26/96, the U.S. dollar is equal to **R\$1.03** Brazilian Reales, in effect making Brazil's currency virtually on par with the dollar, and providing readers with a clear picture of the rates that will follow.)



Although Embratel's Internet service is nation-wide, dialing up is just the cost of a local call. The firm has provided these Internet services since May 1995, and has set up the first commercial network (backbone) in the country — with point of presence being provided in Rio de Janeiro, Sao Paulo and Brasília. Because of its role as the "Brazilian AT&T," Embratel (in a partnership with Cisco Systems Inc.) is working on improving Brazil-U.S. Internet links with satellite and fiber optic connections between Brazil and the U.S., Europe and some of its South American neighbors (like Argentina & Uruguay).

For further information, Embratel can be contacted at its offices in Brazil's main cities and throughout the country:

#### **Rio de Janeiro office**

Seção de Gerência de Clientes do  
Rio de Janeiro  
Av. Presidente Vargas, 1012  
Loja A-Centro, Rio de Janeiro-RJ  
CEP 20070-002, BRAZIL  
(55)(21) 519-8577 voice  
(55)(21) 782-1114 fax

#### **Sao Paulo office**

Divisão de Comercialização de Serviços  
Rua dos Ingleses, 542 Casarão—  
Bela Vista  
Sao Paulo  
CEP 01329-000, BRAZIL  
(55)(11) 238-2611 voice  
(55)(11) 289-0061 fax

#### **Brasília (Distrito Federal) office**

Divisão Comercial de Brasília  
SCS Q.5, Bloco E  
Sobreloja—Plano Piloto  
Brasília, CEP 70328-900, BRAZIL  
(55)(61) 316-8381 voice  
(55)(61) 316-8342 fax

<mailto:info@embratel.net.br>

#### **BRAZIL'S BACKBONE PROVIDER**

The *Rede Nacional de Pesquisas* ("National Research Network" in English) at <http://www.rnp.br> is a Brazilian federal governmental institution responsible for Internet access for that country's universities and scientific & technological institutions, and has been in existence since 1990.

For the past year, though, it has also acted as a commercialized nationwide Internet network for service providers who need lines to get their operations going. In

effect, the RNP acts as an "ISP for ISPs." RNP has an extensive backbone — with 18 dedicated lines carrying speeds from 64 Kbps to 128 Kbps being transmitted between various regional Brazilian cities and an additional 10 dedicated lines carrying a speed of 2 Mbps (that are connected to the cities of Fortaleza, Brasília, Rio de Janeiro, Recife, Belo Horizonte, Sao Paulo, Curitiba, Porto Alegre, and Florianópolis) that in turn connects to the Internet in the United States.

Installation costs R\$1,500 for every speed; month charges are as follow:

SPEED (KBPS)	MONTHLY
64	R\$1600
128	R\$2900
256	R\$4,600
512	R\$7,400
1000	R\$12,00
2000	R\$22,000

#### **RNP**

Rua Pio XI, 1500  
Alto da Lara, Sao Paulo-SP  
CEP 05468-901, BRAZIL  
(55)(11) 837-0311 ext. 217  
(55)(11) 261-4167 fax  
<mailto:info@pop-sp.rnp.br>

#### **MAJOR BRAZILIAN ISPs**

##### **BRNET (VOCÊ DE BRASILIA)**

<http://www.brnet.com.br>

MAX-MAQ  
CRS 507 Bloco A Loja 29/31  
Brasilia, BRAZIL  
(55)(61) 243-5700 voice  
(55)(61) 243-5822 fax  
<mailto:suporte@brnet.com.br>

Located in the country's capital of Brasilia, this ISP's service rates are rather simple: R\$20.00 for the initial sign-up fee, then a R\$35.00 monthly fee (for 30 hours of use), plus an additional R\$1.50 per hour thereafter. BRNET offers WWW access, E-Mail, and FTP service, plus a free home page, and a chat room. Using 116 phone lines to offer full Internet access, BRNET's customer base includes the French Embassy in Brasília (<http://www.brnet.com.br/france>) and the Military Police of the Federal District (<http://www.brnet.com.br/pmdf>).

##### **E-NET TELEINFORMÁTICA LTDA.**

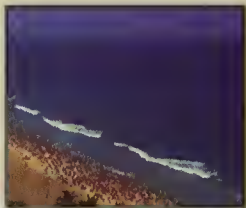
<http://www.e-net.com.br>  
Av. Tancredo Neves  
1283 Sala 1103, Edf.  
Empresarial Ômega  
Salvador, Bahia, BRAZIL  
(55)(71) 200-1020 voice

E-NET offers WWW access, e-mail, and FTP service, plus a free home page, a chat room, and access to newsgroups. There's also technical support and a classified section. E-NET currently uses 67 lines to provide its clients with full Internet access. Unlike BRNET, E-NET (located in Bahia province in Northeastern Brazil) has rates which are broken down according to the amount of time a member is likely to spend per month (as shown below); additional hours cost R\$1.50 each.

Hobby (20 hours)  
R\$25.00  
Student (35 hours)  
R\$43.00  
Professional (50 hours)  
R\$60.00  
Corporate (80 hours)  
R\$96.00







## Internet Booms in Brazil



### APIS - Internet Solutions

<http://www.apis.com.br>

[Mailto:apis@apis.com.br](mailto:apis@apis.com.br)

Apparently, APIS, serving Brasília for six years, imitates BRNET's rates. It offers 24x7 technical support and business connections. The difference between APIS and BRNET is that APIS is one of the few Brazilian ISPs that has rates for unlimited Internet access:

10 hours	US\$15.00
20 hours	US\$25.00
30 hours	US\$35.00
Unlimited Access	US\$120.00

### MARLIN

<http://www.marlin.com.br>

Rua 7 de Setembro 48-13

Andar, Centro

Rio de Janeiro, RJ

CEP: 20050-000 BRAZIL

(55)(21) 224-9950

<mailto:suporte@marlin.com.br>

MARLIN (serving Internet customers in Rio de Janeiro) offers WWW access, e-mail, and FTP service, plus a free home page and technical support. MARLIN also offers training and consulting services for Internet use. MARLIN currently uses 50 lines, and its user/line ratio is limited to 20. This ISP has 750 customers (about 10% of whom are commercial customers), and depending on the service one orders, you can get more than one e-mail address. MARLIN's fee schedule includes base monthly rates of R\$20 to R\$50 for 10 to 50 hours, plus R\$1 to R\$4 per additional hour, depending on time of day those hours are used.

### FENASOFT TRADE SHOW

Sao Paulo played host to the annual Fenasoft computer trade show last summer, attended by 800,000 visitors. Computer publications (in Portuguese) were in great demand; *PC Magazine* reported having sold \$100,000 worth of subscriptions.

Fenasoft is also used to whip up on-the-spot computer sales. The fact that Brazilian inflation has been consider-

ably tame compared to the past only encouraged computer sales in that market — in a vote of confidence in that country's economy. Brazil's strong economy has spurred the availability of credit to finance computer purchases for individuals.

These trends will no doubt contribute to Brazil's mushrooming presence on the Internet — with major potential to put it as a major player in the Internet — for both business and personal use. It is also no surprise that Brazil already has a major presence on the Internet — with both businesses such as the newspaper *Folha de Sao Paulo* (<http://www.folha.com.br>) and individuals alike setting up web sites for all the world to see. *Folha de Sao Paulo*, in particular, has numerous pages dedicated to computer and Internet-related stories, along with advertisements for computers and computer services. ♦

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# PUTTING THE NET TO WORK by Durant Imboden

## MENTAL HEALTH RESOURCES

In New York, it may be fashionable to discuss one's neuroses, à la Woody Allen, and to regard psychoanalysis as being as commonplace as a visit to the dentist or barber shop. In California, it's socially acceptable to be a patient of a New Age therapist who treats psychic illnesses with herbs, magic crystals, and collective hugging in a hot tub.

But for most Americans, mental-health counseling is about as welcome as a visit to an AIDS clinic. Saying "I'm clinically depressed" or "My schizophrenia was acting up again last week" is tantamount to confessing, "I'm insane. You'd better lock me up before I open fire with my twelve-gauge at the shopping mall."

Cost is another factor. Professional treatment is expensive, and it isn't well covered by health insurance. The bottom line is that many people who need help aren't getting it through the usual channels — especially if they're in Pig's Knuckle, Arkansas where "mental health counseling" means waiting for Lurlene, the barmaid, to pour another pitcher of Bud.

### VIRTUAL SHRINKS TO THE RESCUE

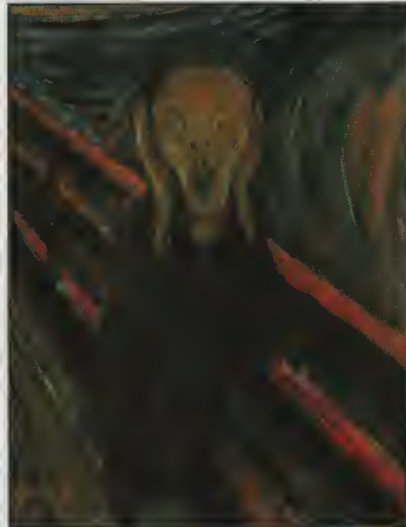
The Internet may not be a panacea for society's ills, mental or otherwise. But it does offer resources to help people who are too self-conscious or insurance-poor to find information and therapy close to home. Indeed, the Internet has so many sites devoted to mental health that it can be difficult to know where to begin.

**Mental Health Net** is a good starting point for mentally troubled Net surfers and their families. This site, located at <http://www.cmhc.com>, is sponsored by CMHC Systems of Dublin, Ohio, a firm that develops software for the mental-health industry.

Mental Health Net claims to be "the largest, most comprehensive guide to mental health online, featuring over 4,112 individual resources." Its pages offer links to magazines, discussion forums, a "Yellow Pages" of clinicians, and an extensive self-help area. The latter has indexes and search engines to help

readers find advice locally and nationally. (For example, search on the phrase "obsessive-compulsive disorder," and you'll be taken to a page with links to related Web sites, newsgroups, and a mailing list that you can subscribe to by clicking a button.)

Another good basic resource is **Internet Mental Health** at <http://www.mentalhealth.com>, which bills itself as a "free encyclopedia of mental health information." The site was put together by a Canadian psychiatrist, Dr. Phillip Long, with programming by Webmaster Brian Chow. Internet Mental Health makes good use of frames to organize hundreds of entries on mental disorders, medications, and other topics. Click on a disorder, and you're taken to a menu that includes descriptions, treatments, research, magazine articles, and links to related Internet sites. The quantity of information available is staggering — and yet, because the data is so neatly organized, it's easy to drill down to the material that interests you without getting lost.



*Bad Day? Try A Cyber-Shrink!*

**Psych Central: Dr. John Grohol's Mental Health Page** takes a slightly more personal approach at <http://www.coil.com/~grohol>. The author, now a clinical product manager for CMHC Systems (see above), is a psychologist and former BBS operator who has founded more than two dozen mental health newsgroups. Grohol hosts weekly "Psych Central Station" chats on WBS (the Web Broadcasting System), <http://wbs.net>, as well as the #psych chat channel on Undernet IRC Servers.

For the psychoanalytically inclined, **Russ Dewey's Psych Web** is a "must-see" — if only because it includes the full text of Sigmund Freud's *The Interpretation of Dreams*. Though unexciting from a design standpoint, Psych Web has scores of useful links (some intended mainly for professionals) at <http://www.gasou.edu/psychweb/psychweb.htm>.

**Gerald R. Quimby's Mental Health Education Page** is a friendly, informative consumer's guide with the subhead, "Removing the stigma of mental illness." Its topics and links include descriptions of the therapeutic process, what to do "when you feel something is not quite right," and a discussion of the differences between psychiatrists, psychologists, social workers, and mental-health counselors. The site's URL is <http://www.metrolink.net/~jqkimby/mh.htm>.

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network. His credentials include published novels, articles, and short stories; fiction editing and staff writing for *Playboy*; representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts. When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. **Mailto:** [Durant\\_Imboden\\_msn@msn.com](mailto:Durant_Imboden_msn@msn.com) on the Internet. The author is not an employee or spokesman for Microsoft.



Since even mentally ill people must pay taxes, it's nice to know that their needs haven't been ignored by the U.S. Department of Health and Human Services. The department's National Center for Mental Health Services sponsors the **Knowledge Exchange Network** (KEN) site at <http://www.mentalhealth.org>. KEN is a vast compendium of online publications, links to external sites, a database of 1,800 mental health organizations, and other materials. Although some of the links aren't of much interest to laypeople, KEN's "Mental Health Resources on the Internet" page is well worth visiting.

Depression is one of the most common mental disorders, and the **Depression Resources List** is an indispensable Web site for anyone with a severe case of the blues. The list, at <http://earth.execpc.com/~corbeau>, has links to newsgroups, FAQs, related Web sites, and IRC chats. Webmaster Dennis Taylor even brings a sense of humor to a dreary subject by featuring a link to **Dr. Katz, Cyber-Therapist**, <http://www.comcentral.com/katz/katz2.htm>, where readers can use an "auto-diagnosis form" for instant (and tongue-in-cheek) diagnoses from a cartoon therapist on TV's Comedy Central.

Untreated depression may lead to "suicide ideation" or actual suicide. **The Magic Stream**, "a literary e-zine and mental health resource" at <http://fly.hiwaay.net/~garson>, has a useful Suicide Intervention Page with emergency advice and links to other anti-suicide resources.

If the thought of depression, suicide, or anything else makes you fearful, it's time to visit **The Phobia List** at <http://www.sonic.net/~fredd/phobial.html>. This site may not look like much, but where else can you learn that "venustraphobia" is a fear of beautiful women and "soceraphobia" is a fear of parents-in-law?

By now you may be thinking, "Enough with the mental health information — how do I get personal counseling at 28.8Kbps?" That question leads us to...

## ONLINE THERAPY

Is online therapy practical? Is it wise? Or is it just another Internet scam? Such issues are discussed in an article titled "Online Therapy Sessions Raise Ethical Questions." The article, taken from the American Psychological Association's **APA Monitor**, is available in **Mental Health Net's Reading Room** at <http://www.cmhc.com/articles/apal.htm>.

"This is definitely not a substitute for face-to-face psychotherapy," psychologist Dorothy Litwin, Ph.D., says in author Scott Sleek's article. "But in some cases it's terrific when people don't have access to a professional person, like in rural areas." Litwin, who launched a service called **Shrink-Link** at <http://www.westnet.com/shrink/shrink.html> last February, says "I guess it's sort of 'Ann Landers' online, except we're all trained professionals."

Shrink-Link claims to be the Internet's oldest and largest service of its kind. The service invites visitors to submit questions in any of seven mental health categories, using an e-form. For a fee of \$20, the customer receives advice from an experienced clinician within 72 hours.

The site does include a disclaimer: "Shrink-Link is not a substitute for face-to-face counseling, and may not be appropriate for everyone. However, it does focus the attention of a group of highly trained mental health professionals on YOU! Each pan-

elist has 15-40 years of clinical experience. These are the same people who charge \$100-\$200 per session!"

Shrink-Link also warns that full-fledged "online therapy" sites "are considered unethical by most mental health professionals, professional associations, and licensing bodies." This claim might be disputed by **Therapy Online** at <http://kaos.deepcove.com/therapy>, which provides "confidential, professional online counseling and support to the Internet community." Therapy Online offers a variety of services, including:

- **Ask PATtY Q**, in which therapist Dan Mitchell — a.k.a. PATtY Q — answers questions of the advice-column variety for \$25 each.
- The **Virtually Solve It** (VSI) worksheet, a self-help instrument priced at \$15. This can be combined with:
- **Therap-e-mail** at \$40, including a VSI worksheet that the user completes and e-mails to a therapist who writes a personal response. Online patients can continue the therapeutic relationship as long as they wish, providing they pay \$40 by check or credit card for each two-way communication with a therapist.

For those seeking a more touchy-feely approach to online therapy, Dr. Dina Bachelor Evan offers **Transformational Relationship Counseling** at <http://www.in-two-one.com>. Dr. Evan is a licensed marriage, family and child therapist who doubles as "a gifted spiritual and psychic healer." She charges \$25 to answer a question of 200 words or less on "relationships, family issues, individual growth issues, and spiritual growth

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issues." Questions are submitted via a structured questionnaire form that includes a checkbox where the patient can ask for a referral to a local support person or team. Visitors who aren't ready for therapy can opt for a selection of inspirational books and gifts, including a book of poetry by Dr. Evan.

The **Cyber Psychologist**, <http://cyberpsych.com>, is operated by Robert F. Sarmiento, Ph.D., of Houston, Texas. Dr. Sarmiento offers a variety of checklists and other self-help materials, together with suggested readings and Q&A forums on topics such as relationships, addictive behavior, stress, depression, and general psychology. Visitors can request advice on personal problems for \$40 per question, although Dr. Sarmiento's disclaimer states that "I will be providing information and education, not therapy."

**Sex Therapy Online** takes a more focused approach by offering personal e-mail consultation and live phone or Internet consultation at <http://www.cyberoti.com/sandor>. Dr. Peter Sandor Gardos and his staff charge \$25 for replying to a question submitted through the site's e-form.

My own favorite therapy site, the **Mental Health Cyber Clinic**, takes a refreshingly honest approach to online counseling. On his clinic's home page at <http://www.dcez.com/~davids/pageone.htm>, Dr. David I. Sommers admits that his treatment method is experimental. He explains: "Many websites claim to deliver therapy or something akin to therapy via the Internet. I'm not yet certain this can be done. Personal contact is thought to be needed to form and sustain a relationship, and a relationship is a required element within a therapy experience."

Sommers adds: "This site may appeal to users who have economic barriers to traditional psychotherapy, initially want a little distance in any sort of therapeutic relationship, live in remote areas where therapists are not readily accessible, have physical disabilities that make getting to traditional therapy too difficult, or are thinking about entering traditional therapy but first want to get a sense of what it might be like."

A patient's initial contact with Dr. Sommers is free. Beyond that, fees vary according to what the patient needs and

can afford. E-mail advice costs \$10 to \$20 per response, or \$75 to \$150 for an ongoing series of contacts. A PowWow chat, Internet phone, or videoconference session is normally \$25. If a patient can't afford to pay, Dr. Sommers promises that "we'll work something out."

The Mental Health Cyber Clinic also includes ASAP WebShow slide shows on Cognitive-Behavioral Therapy, links to other Web resources, and — perhaps most interesting of all — a "data and outcomes to date" page with site statistics and user comments.

Finally, on his "caveats and cautions" page, Dr. Sommers asserts: "I am well aware that many will scoff at the idea that real mental health care can be provided here at all. I respect that skepticism and would not argue strongly with it at this time. But I really do think that within the next 10-20 years something like what I offer here will be more generally accepted as a real alternative form of care for some people, some of the time." ♦



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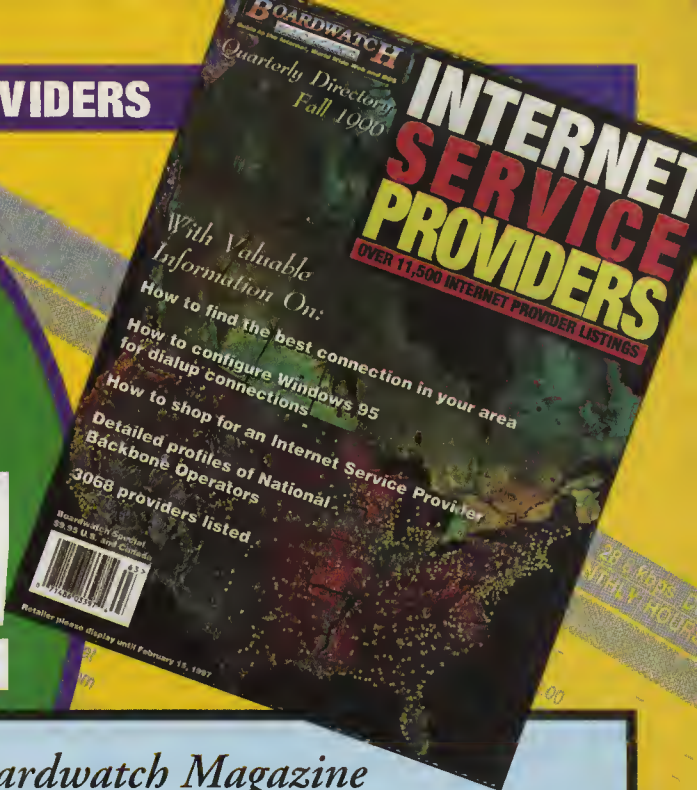
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# BIG BOARD BRIEFS by Wallace Wang

## BEWARE AMERICA ONLINE'S FLAT RATE

Never content to do anything in a straightforward manner, America Online has recently bowed to the pressure to offer a flat-rate subscription plan. Sounds good so far, but wait!

Unless you choose otherwise (by using the **Keyword: New Pricing**), America Online automatically signs you up for their **\$19.95** flat-rate subscription plan, which gives you unlimited hours to use America Online or the Internet. If you don't want that, you can switch to their **\$9.95** flat-rate fee that only gives you unlimited access to America Online but not the Internet.

Now watch carefully. If you choose the **\$9.95** flat-rate plan, America Online plans to charge you **\$2.50** per hour if you use their phone network. To avoid this **\$2.50** hourly surcharge, you need to access America Online through a separate Internet Provider (such as SpryNet, EarthLink, or the hordes of smaller Internet Service Providers sprouting up around the country).

Since most of America Online's customers are novices, they will probably continue accessing America Online through America Online's own phone network, which means that the **\$9.95** flat-rate charge will now cost them more to use than America Online's **\$9.95** basic plan that at least gave you five free hours before charging you an hourly surcharge.

Combined with the fact that most people will be slow to switch (if they take the time to do it at all) from America Online's **\$19.95** flat-rate to the cheaper **\$9.95** flat-rate, this could be America Online's new way to squeeze a little more money out of customers while innocently looking as if they're offering their customers a bargain.

Perhaps America Online's new motto should be, "We're Number One because nobody is better at deceiving customers than us!"

### COMPUERVE LOSES MONEY — AGAIN

In the wake of continuing defections to the Internet or rival online services, CompuServe has announced that they expect to continue losing money for the next quarter. Officials said the company would lose between 22 and 27 cents per share. In previous statements, CompuServe had forecast an expected per-share loss of 10 to 15 cents, which goes to show you that if CompuServe can't even guess their losses accurately, why would anyone expect them to guess what their customers really want and deliver it to them on time?

Total membership to CompuServe has dipped to 5.3 million and continues sinking compared to

America Online's current claimed membership of 7 million people.

Maybe CompuServe needs a new motto. "We're Number Two because we weren't smart enough to stay Number One!" If CompuServe doesn't reverse their declining membership soon, they might even have to change this motto to "We're Number Three because we couldn't skip directly to Number Four."

### PRODIGY: NUMBER FOUR AND FALLING

Actually taking the initiative to respond before sluggish CompuServe, Prodigy has announced their own flat-rate subscription fee in the wake of similar announcements made by America Online and the Microsoft Network.

Prodigy plans to charge — you guessed it — **\$19.95** a month for unlimited use of both the Internet and live chat, discussion groups and content available only through Prodigy. Added Prodigy Chairman Gregory Carr, "As of today we are a new animal. We are a value-added Internet service and no longer an online service."

To prevent itself from disappearing like CompuServe is doing, Prodigy plans a **\$100 million** ad budget for radio and print ads. In this way, Prodigy hopes to entice newcomers to the Internet and reverse its steadily declining membership.

The new Prodigy Internet service will be available for Windows 95, Windows 3.1 and Macintosh users. A Spanish version of Prodigy Internet will debut in the first quarter of 1997. To get a copy of Prodigy's new software, call **(800) 776-3449** or download it at <http://www.prodigy.com>.

Wish Prodigy well. After falling behind America Online, CompuServe, and the Microsoft Network, there might not be enough life left in the once thriving online service to last much longer. Perhaps Prodigy's new motto could be, "You would be Number Four too if you were handicapped by the initial leadership of Sears and IBM."

### GNN EATEN BY PARENT AOL

With the Microsoft Network, America Online, and Prodigy announcing flat-rate subscription fees, can the death of independent and national ISPs be far behind? After making their stunning announcement of the obvious, America Online also announced that they'll be dropping their pure Internet service, Global Network Navigator (GNN) and laying off 300 people.

Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672@compuserve.com or bothekat@aol.com or bo\_the\_cat@msn.com



Of course in the usual America Online optimistic doublespeak, the company announced that the initial 300 layoffs are part of an effort at corporate reinvention that will produce as many as 1,600 new jobs by next year. America Online believes that by the end of the company's fiscal year, in June 1997, it could have as many as 7,500 workers. To help them reach this goal, they might be planning to lay off even more workers as well.

As part of their growth, America Online has announced a four-year, **\$340 million** deal with Internet specialist BBN Corporation to help them expand. This deal calls for BBN to deliver and support 70,000 modems per year and maintain America Online's TCP/IP dial-up backbone, dubbed AOLnet, to meet future demand for online service.

## DISNEYLAND PARIS JOINS COMPUERVE

What do you get when you put two desperate companies together? CompuServe and Disneyland Paris cooperating to present the ultimate online guide to Disneyland Paris (GO DLP).

Here you can take a virtual tour of Disneyland Paris in English, French or German. Find out what Disneyland Paris looks like (and why it's still losing money), and learn about its many attractions. Those who are planning a European trip can organize their stay with handy hints about how to get there, what to ride, where to eat and when to shop. Disneyland Paris has six theme hotels and a wilderness ranch; you can even book the hotel and package of your choice by e-mail.

Bill Jones, managing director of Disneyland Paris said, "We are very excited that our customers can now discover the magic of Disneyland Paris by using CompuServe. This will capture the whole family's imagination and, by enjoying the fun of the Park online, they may decide to take the next logical step and experience the thrill of our popular rides and attractions for real!"

So now you can get information about an amusement park that few people are visiting using an online service that even fewer people are joining. Maybe in the future CompuServe will offer its members the latest information about slide rules, Edsels, and Beta video cassette recorders too.

## COMPUERVE STOPS SPAMMERS

CompuServe has won a restraining order against online advertiser **Cyber Promotions Inc.** because the company allegedly tried to pass off its mass-mailed promotions as originating from CompuServe. The restraining order, issued in U.S. District Court in the Southern District of Ohio, prohibits Philadelphia-based Cyber Promotions from using CompuServe accounts to send e-mail and from indicating e-mailed promotions were sent from CompuServe or one of the company's accounts.

"Our users have told us they don't want junk mail clogging their mailboxes," said Denny Matteucci, president of Interactive Services at CompuServe. "Junk mail is as unwelcome in cyberspace as it is through the postal service."

Also today, rival service America Online debuted its **PreferredMail** software tool for thwarting unwanted e-mail. PreferredMail, which users can modify or switch off at any time, blocks unsolicited mail from "notorious junk e-mailers," said America Online officials.

America Online had previously won permission to block Cyber Promotions' mailings and from using "misleading" addresses to disguise the origin of its e-mailed ads.

## NEW YEAR'S PREDICTIONS

So what does the future hold for the online market? Given that this is the time of the year when columnists air their new year's predictions, here's a list of my predictions for the future.

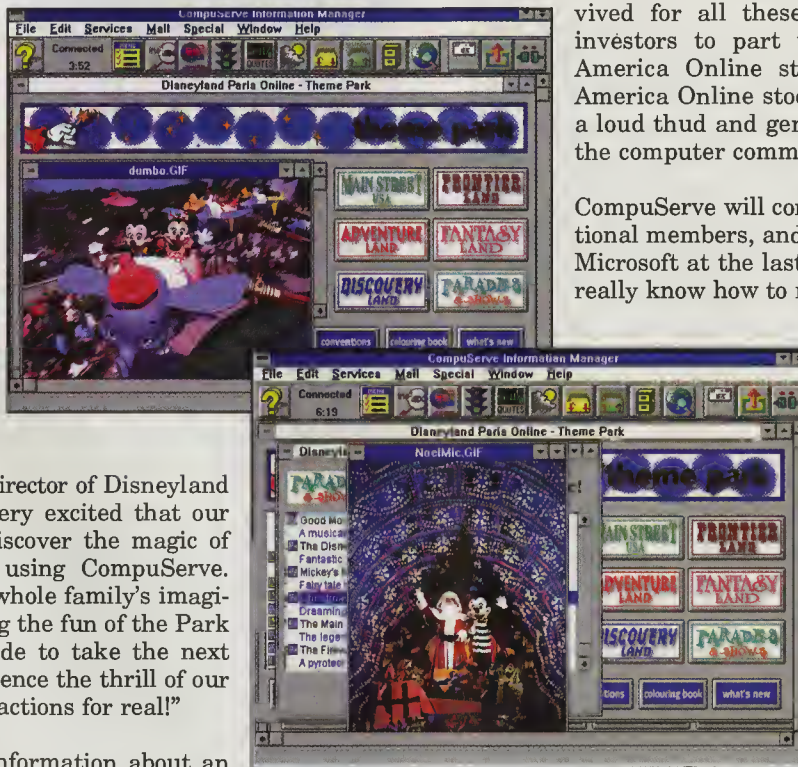
Wall Street investors will finally realize what the rest of us have known for years: that America Online stock is highly overrated and the only way the company has survived for all these years is by enticing unwary investors to part with their cash and purchase America Online stock. Then watch the price of America Online stock come crashing to reality with a loud thud and generous applause from the rest of the computer community.

CompuServe will continue fumbling about, lose additional members, and only save itself by selling out to Microsoft at the last minute. Since Microsoft doesn't really know how to run their own Microsoft Network online service, it only makes sense for them to buy out CompuServe, merge the two online services, and allow CompuServe to run the combined online service for them while providing financial support in return — which is how CompuServe survived for years under H&R Block.

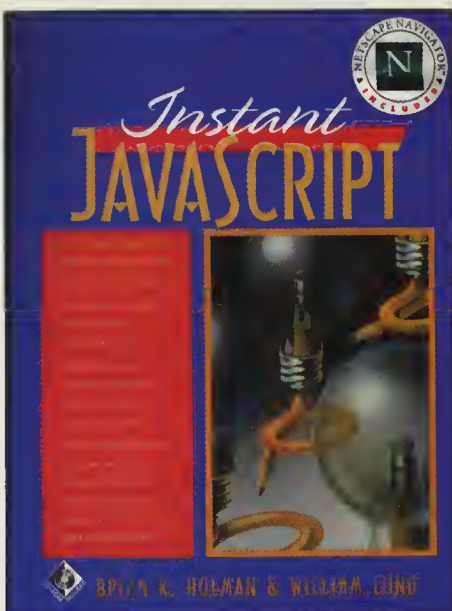
Prodigy will continue limping along and become a company best known for its total irrelevance to the Internet community at large.

About the only online service that will thrive in the coming year will be the Microsoft Network. Given the unlimited financial support of Microsoft and its prime location on the Windows 95 desktop, its membership will continue increasing and eventually challenge America Online for the number one spot.

Then again, if none of these predictions occur, it won't really matter since more people will be using the Internet by then and avoiding online services altogether. But it's always fun to make guesses and who knows? Maybe one or two of them will come true after all. ♦







## BOOK BYTES by L. Detweiler

**Instant JavaScript**  
By Brian K. Holman &  
William Lund  
1997, Prentice-Hall, Inc.  
399 pages, **\$29.95**,  
Includes CD-ROM  
ISBN #0-13-268434-9  
(800)643-5506

<http://www.prenhall.com>

This book stands as one of the superior initial expositions of the JavaScript language, although the language is now at version 3.0 and this book generally deals with version 2.0. The book has excellent coverage of LiveWire, server side JavaScript, and SQL database integration. It wastes little time on toy Javascript applications and jumps right into the more complex aspects of JavaScript, such as creating complex client-server LiveWire applications. The book starts out in tutorial format, moves into a description of the JavaScript language, and then covers its object oriented programming features. It describes all the built-in objects and their properties in a browsable, consistent, and highly readable table format: navigator, window, document, frame, form, math, string, date, file (server side), etc. The book concludes by developing a complex message board application. Final chapters describe brand new techniques that allow Java/JavaScript integration using the Sun Java Developer's Kit (<http://www.javasoft.com>).

We were somewhat aggravated by the lack of a single tree diagram of the entire object hierarchy, although there are copious illustrations of pieces of this whole in the form of bubble-like diagrams showing objects embedded within objects.

This book will be valuable to programmers from beginner to expert. It's probably not appropriate for utter novices who want to start programming with JavaScript, although such a thing is not impossible using other books. We were impressed with the organization, content, and layout of the book. It covers many complex issues in a concise and expedient manner. The heavy use of tables and diagrams has the feel of being expertly guided and coordinated. The use of many different typefaces and formats is visually attractive without being confusing. The CD contains all the example code and Netscape Navigator 2.02.



**Intranet Business Strategies**  
By Melanie Hills  
1997, John Wiley and Sons  
396 pages, **\$29.95**  
ISBN #0-471-16374-0  
(800)225 5945

<http://www.wiley.com>

Wiley is aggressively pursuing the Intranet niche with this and two other titles (*Building the Corporate Intranet*, Guengerich et. al., and *Intranets as Groupware*, also by Melanie Hills). From what we can tell the books all have similar content and coverage, but the emphasis in this book is on overcoming the higher-level organizational and political issues of adopting an intranet, while the others get into more technical matters.

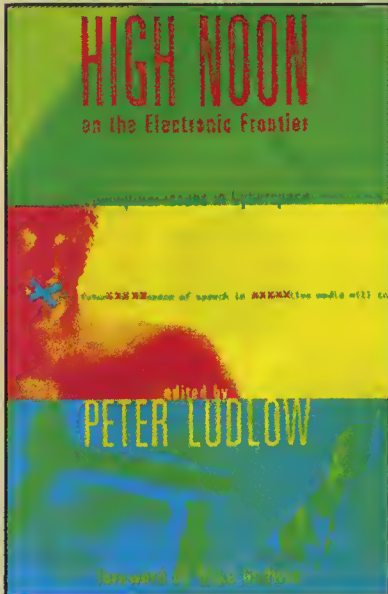
Hills has strong experience in organizational aspects of intranets including teaching. The book starts with basic intranet history, advantages and disadvantages, and how the intranet can change an organization. The second part of the book focuses on the general processes intranets apply to, such as communications, support, product development, operations, marketing and sales, and customer support. Useful case studies include AT&T, Bell Atlantic, EDS, JC Penney, Rockwell, Silicon Graphics, Inc., Texas Instruments, Turner Broadcasting, etc. We're impressed with the detail of the case studies given corporations' general reluctance to reveal their internal network structures; they all really nail down the value of the book.

Later chapters cover the process of creating an intranet, including selling it to the executives, building, "creating" audience, promotion, an intranet team, expansion. It closes with intranet resources related to each chapter in the book.

Overall we find this book appealing to managers and higher-level integrators who don't want to be overwhelmed with technical minutia but need to focus on feasibility, organizational, and cost-benefit aspects of



implementing new technology. The book has numerous checklists and even describes sample meeting scenarios among intranet participants. There's strong emphasis on more human-oriented factors such as successful team-building and coordination. However the coverage of database integration, perhaps the most integral intranet capability, is minimal.



**High Noon on the Electronic Frontier**  
edited by Peter Ludlow  
1996, Massachusetts Institute of Technology  
536 pages, \$30

<http://www-mitpress.mit.edu>

Cyberspace-as-a-cultural is increasingly showing up on the literary radar. The author taught a class at MIT in 1994 on "Philosophical Issues on the Electronic Frontier." Ludlow has compiled a fresh and provocative collection of essays under a remarkably liberal charter, at the opposite extreme of the pedagogical tone one might expect of an academic. (See his home page at <http://sem1ab2.sbs.sunysb.edu/users/pludlow/ludlow.html>). He starts off the book with a crisp and colorful introduction that wastes no time in cutting to the chase, indicting academics for prose that "reeks of half-learned post-modern cant, or is a dense thicket of bad sociology... Sometimes we academics can analyze things to death, when maybe it would be better to set up the problem in an interesting way, and then just leave the room. Basically, that's what this collection is all about - raising difficult conceptual issues then leaving the room." Ludlow's explanation of the book's origin starts with the MIT class he taught:

*"My plan was to start with Julian Dibbell's Village Voice article 'Rape in Cyberspace' and then move to more standard readings that might typically be taught in a course on computer ethics. Things began well enough, but the class slipped into a collective coma when we moved on to the standard academic readings in this area. Accordingly, I did what any reasonable person would do under the same circumstances-I sold out. I went back to assigning the more 'in your face' rants and manifestos that are easy enough to find in cyberspace but virtually impossible to find in text books.*

*"When I turned to the more gonzo readings, the class woke up ... and it actually began to think seriously about some of the deeper issues underlying these assigned electronic rants."*

The radical philosophical flavor of both Ludlow and his essays now established, the contents of the book are not surprising. Ludlow includes generous samplings of unparalleled and widely-recognized cyberspace luminaries: John Perry Barlow, Mitch Kapur, Mike Godwin, Carl Kadie, Howard Rheingold, Dorothy Denning (Clipper proponent). Politically active software engineers such as Richard Stallman, Philip Zimmermann, and David Chaum make appearances. Premiere cyberspace authors such as Steven Levy, Philip Elmer-Dewitt, Julian Dibbell are well represented. Bruce Sterling shows up but not with one of his more interesting pieces.

In the "gonzo" and "rant" category alluded to by Ludlow are found some of the more intriguing and entertaining — but outlandish — writings. "The Conscience of a Hacker," anonymously written by "The Mentor," has a hypnotic combination of brevity, pathos, and warped thinking. Noted anarchist and cypherpunk founder Timothy May (with a signature describing his interests in, among other things, black markets and the collapse of governments) waxes philosophical about the implications of his conceptual creation Blacknet (for which "my legal protection is ... it does not exist as an actual espionage entity") as well as "Ace's Anonymous Escrow Service — You Slay, We Pay," concluding somewhat petulantly, "just because some people misuse a technology that is no reason to bar others."

The sections are, "Piracy, Property Rights, etc.: Does Information 'Want to be Free?' (software patents) "How Should We Respond to Exploratory Hacking/Cracking/Phreaking?" "Encryption, Privacy, and Crypto-Anarchism," (Clipper chip, digital cash) "Censorship and Sysop Liability," (Martin Rimm study, sex in cyberspace) "Self and Community Online" (MUDs, virtual communities).

We're elated with all the diverse gems of cyberspace being conveniently collected in this book, with virtually all our philosophical favorites and classics included. Some of the essays and authors will be given new life from this thoughtful and well-constructed compilation. A few others (who perhaps should remain "anonymous") might cringe at the uncomfortable mainstream public exposure newly brought to their poorly-concealed ulterior agendas! In any case the volume would make a great gift to anyone interested in the surprisingly deep controversies, white-hot-button issues, and philosophical jousting matches that regularly fuel the flames of cyberspace. ♦



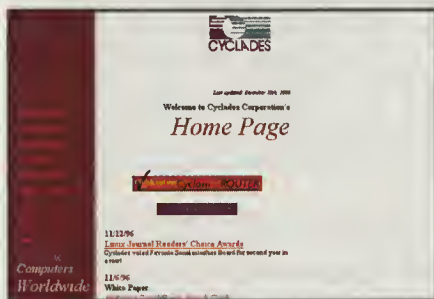
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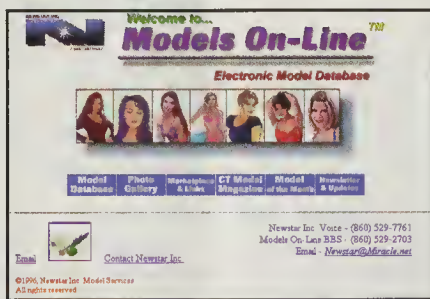
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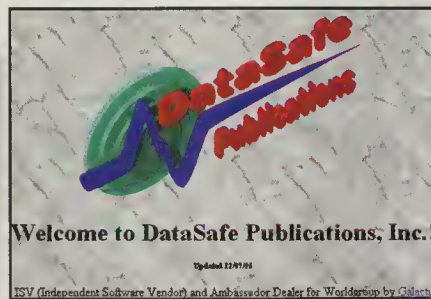
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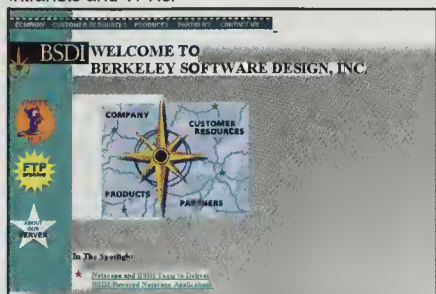
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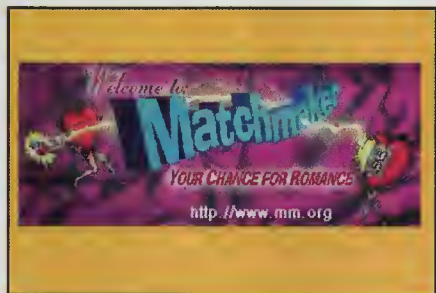
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# DVORAK ONLINE by John C. Dvorak

## THE ROAD AHEAD (FOR ONLINE SERVICES)



In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured "Inside Track" column in *PC Magazine*, Dvorak is the author of several best-selling books, including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*. John can be reached at [mailto:dvorak@aol.com](mailto:mailto:dvorak@aol.com)

With AOL and CIS both reporting heavy losses after a growth spurt that was netting each of the services 200,000 to 300,000 new subscribers a month, you have to wonder if the online services (including MSN and Delphi) have a clue about how to make money. Taken as a whole — and we must include the moribund GEnie and the Source (remember them?) as well as the perpetually faltering Prodigy — this group seems hopeless. Let's look at the problems they have.

First, when people get into this business they generally get greedy. There is no explanation, but the same stories about greed and jealousy seem to repeat themselves over the years. These always surround the information providers. Any time one of them begins to make some serious income, the online service decides it's either time to cut their royalties, fire them or start a competitive service itself.

The first time this happened in any big way was over ten years ago, when CompuServe saw that Neil Shapiro was making over \$100,000 in royalties running MAUG (Micronet Apple Users Group) which he started when CompuServe was still called Micronet. Someone decided that he was too successful and told him that they were going to simply take over MAUG. You should have heard Neil whine about this situation at the time. He made enough of a fuss that CIS determined that this move would not be politically correct, so the idea was dropped after they made a couple of runs at MAUG. They ended up starting a somewhat competitive service as well as welcoming MacUser into the service. Over time MAUG faded anyway.

The way I saw this was like having a salesman who was so good that you fired him. "Hey, this guy is too good. Let's screw him and get rid of him." What kind of logic is this? A smart businessman says give him MORE work. See if he can make a million dollars in commissions.

This story is repeated over and over by numerous sysops on all the services. Once you achieve success, then the services figure it should be their money. So much for partnering.

If you want to examine the latest episode in this fiasco then talk to the people who run *NetGirl* on AOL. They're having the same problems as MAUG a decade earlier, watching AOL starting up dozens of competitive but lame "personals" forums. This seems to be the current example du jour.

With this kind of thing prevalent, it was no wonder everyone thought Microsoft had a winner when it announced MSN — in which the information providers would get the lion's share of the online profits. Microsoft would do nothing on its own. Gee, *that* lasted all of ten minutes, didn't it? The hapless information providers were lured by MSN only to find that, to this day, MSN can't keep its original promises for tools and support, and more importantly, can't even account for the *money* it takes in. I've talked to more than a few providers who can't get an accounting.

As an experiment, I posted a white paper on *21st Century* (an MSN 'Zine). The report sells for a few dollars but it seems that after six months or so it's impossible to know anything about its sales (1 copy sold? 100 sold? Who knows). And MSN was originally designed to be a service where royalties were going to be flying everywhere. This fiasco makes me wonder what's really going on at Microsoft.

While some pundits were predicting that MSN was not only going to take over the world, but would destroy the Internet (ha!) it was obvious from the outset that Microsoft was clueless about such a venture. I have no idea why some of my colleagues would buy into this nonsense, but they did.

Microsoft's mistake was they didn't follow their normal pattern of simply finding the best technology and copying it. In other words, roll out an exact clone of AOL. Instead it took the abnormal (for Microsoft) Not-Invented-Here approach and schlocked together MSN. While I admire Microsoft for trying to be original, it will someday admit to itself that it *cannot* be original. That's not what it does best.

Anyway, the other aspect of greed is the subscriber base. It was no wonder the big boys CIS and AOL took a hit on the bottom line after going nuts with new subscribers. AOL is the worst in this regard. The free disk being put everywhere is ridiculed and it's a bad idea. What these services want are good subscribers who will stay put, not kids who take the ten free hours and run. Bigger is not necessarily better. AOL has never spent any time fine-tuning its ads or targeting its audience. It just goes for the numbers. As with a good magazine, circulation must be managed. This seems to be a concept lost to these people. Worse, by loading up the system with newbies who will never pay a nickel, the strain on the connections just annoys the long-time users. Then to lose the whole system for a day, as happened at AOL, is inexcusable.



Most of the smart observers believe that all these services will eventually become value-added ISPs, hooking people to the Internet while offering some specialty services for the subscribers. AOL with its \$19.95 flat rate shows signs of this. But I'm not sure AOL knows its own customers well enough to understand the implications of the \$19.95 flat rate, and I can predict some changes to this within no time.

AOL has one of the most compelling chat systems online. Everyone who EVER chats on AOL will go bonkers and the chat system will be filled to capacity 24-hours a day. This reminds me of the Prodigy "FREE Email" strategy that backfired. While CIS and MSN could get away with the \$19.95 per month deal and let Internet users pass through their systems onto a straight PPP connection to the Net, AOL cannot. AOL has no direct PPP connection that I've ever been able to get to work (correct me if I'm wrong) and the Net connection goes through an AOL layer, adding to system overhead. Furthermore, MSN has the worst chat system, so nobody will use it to death. CIS isn't much better. It's ironic that because your service is so superior (AOL) that it will be a handicap as a value-added ISP service. We'll see how they adjust to this problem over the next few months.

Whatever the case most analysts believe that the online services billing systems are so elaborate (MSN being the exception) that they can be the engines behind every micropayment and online scheme imaginable and could rule the online wars in the years ahead. But I see no evidence that they can manage this transition. The next six months will give us the answer as the fixed monthly rate takes effect.

Now as a disclaimer, I want to make it clear that through all my complaining I find the big online services to be invaluable. I use them for easy e-mail. AOL, for example, will take an uploaded attachment and send it to my editors at **PC Magazine** into the Notes system there intact as a binary file. This is not trivial. When I do this through MSN the editor gets garbage. I also use AOL for stock quotes and for news summaries. Compuserve has the Magazine Database Plus and the Computer Database Plus, two invaluable research tools that I cannot live without. There is nothing on the web that comes close except for the Infonautics Electric Library. MSN, without question, has the finest Internet link of the three giving you a direct PPP connection into UUnet. It installs effortlessly and works flawlessly. The company, though, cannot seem to communicate this advantage properly. Instead it puts up meaningless billboards saying MSN is the way to the Internet. Oh? And that means something to a motorist? It reminds me of Apple in its inability to get the word out about what ease of use really means.

Historically these services have never made much money. I'm not sure they can ever make much money. When they do make money they over-expand or make dumb decisions or promise more than they can really deliver. The only difference between now and in the past is that these services are now bigger. But it's like the guy who sells watermelons. He has a booming business because he buys watermelons in the valley for 10-cents a pound and sells them in the city for 10-cents a pound. It costs him \$20 in gas every time he sells a load and he loses money. When asked what he intends to do to make money selling these melons, his answer is "buy more trucks!" ♦

## Dvorak's Recipe Nook

### Creative Flavoring and Daily Cooking

It's great to live in California, where you can always get a huge variety of fresh fruit and vegetables to make meals interesting. But in some parts of the country there is hardly anything interesting available, and the challenges to make interesting meals is increased. Overlooked in most cooking is the use of syrups to enhance food. While in Maine the use of maple syrup is common and some of the dishes using it are phenomenal, few cooks experiment with more exotic syrups. It's only used to make drinks. So let's look at a salad dressing that utilizes Ginger Syrup.

#### 751 Ginger-Lemon Dressing

Place in a blender the following ingredients (adjust for individual taste).

- One medium sized whole lemon quartered
- One clove garlic
- 3 tsp white vinegar
- 1 tsp Americanized Dijon Mustard (Woebers, Grey Poupon, etc.)
- 1/8 tsp ground black pepper
- 1/8 tsp salt
- 1/4 - 1/2 tsp dried marjoram
- 1/3 cup neutral oil (peanut or corn)
- 2 tbl ginger syrup such as Le Sirop de Monin Ginger Syrup (used in cocktails)

Blend all ingredients until the lemon is pretty much destroyed. Strain through a strainer into a bottle or jar. You should end up with a delicious emulsion-type dressing which is absolutely delicious and unique. If you like the lemon flavor you might use two lemons instead of the vinegar. It's a refreshing taste in salads. You may also want to increase the amount of mustard to taste. You might also try a brown mustard such as Gulden's. For this recipe I avoided true Dijon type mustards or yellow mustards which are too distinctive.

You should note that Grey Poupon as made in the USA is not the same as that sold any other place in the world. Even in Canada Grey Poupon is real Dijon mustard — hot and peppery. In the USA

it's rather bland and made differently. The same holds true for French's Dijon which is real Dijon-style in Canada and bland in the USA. This curiosity is worth mentioning for other seasonings too. I'd advise people who travel to buy a bottle of Lea and Perrins Worcestershire Sauce from various countries and compare them. No two are alike in flavor. But I digress.

Anyway, the point of all this is that the use of the ginger syrup which adds sugar, acidity and flavor can be slipped into other concoctions to create unusual taste treats. Look to other syrups to add to salad dressings, stews, gravies, marinades and just about anything you can think of. You'll impress your friends.

# All signs point

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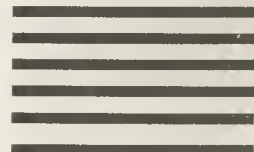
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